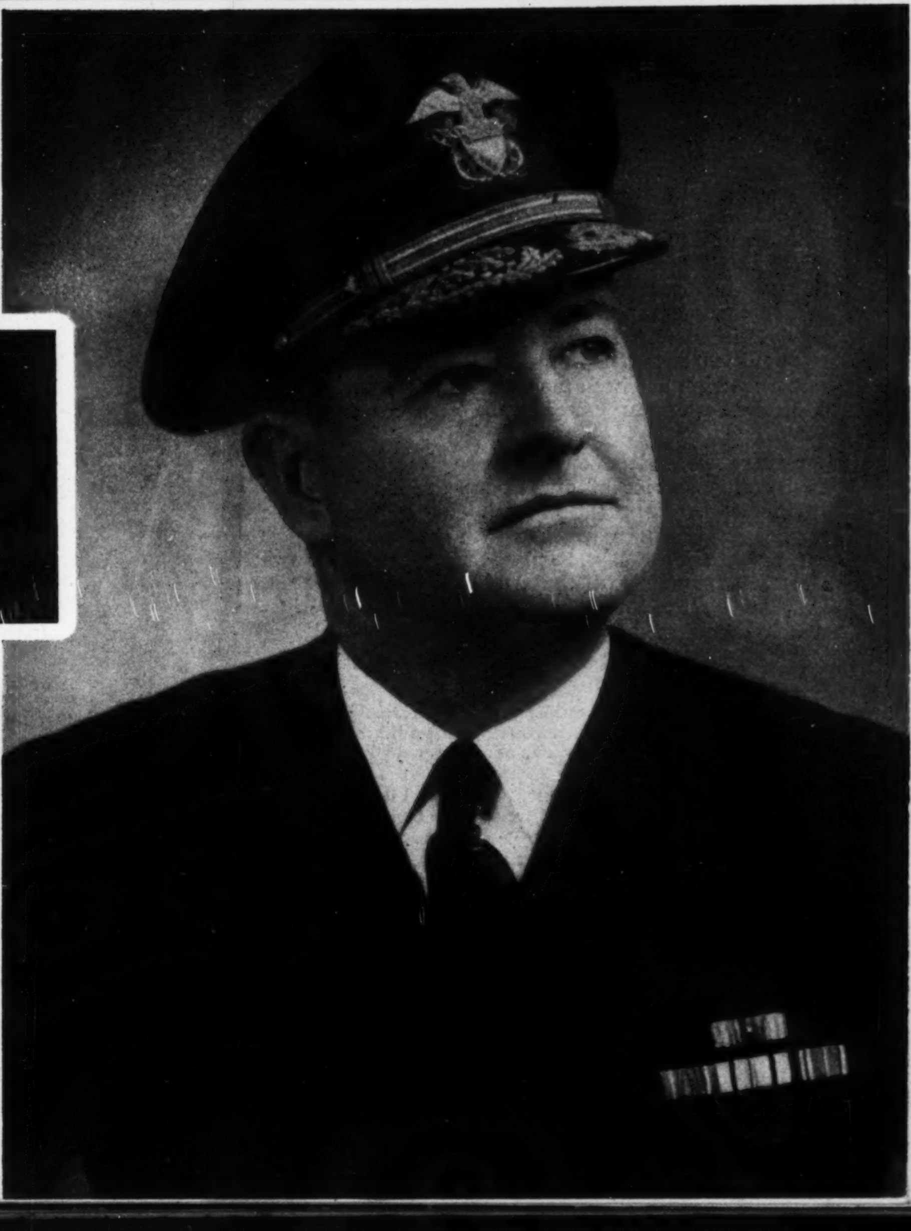
ENGINEERING NEWS-RECORD

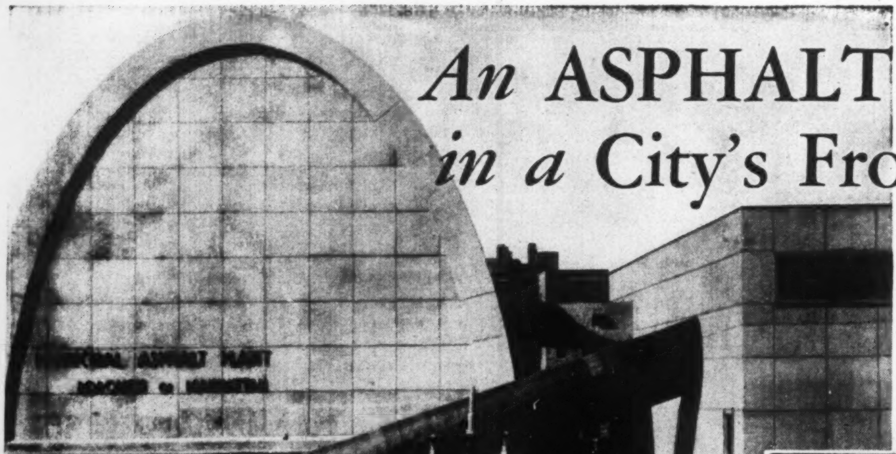


Rear Admiral

JOHN J. MANNING

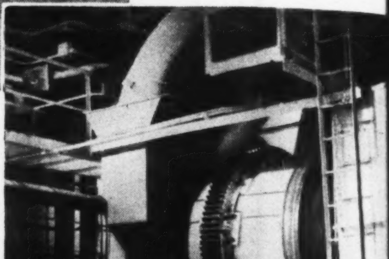
Director, Atlantic Division

Bureau of Yards and Docks



An ASPHALT PLANT *in a* City's Front Yard

Exterior of the plant, facing East River Drive



G-E 40-hp mot operating a 60-to two-fire dryer

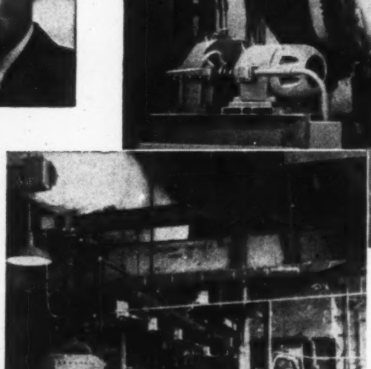
by: AUBREY SMITH
Industrial Engineering Division
General Electric Company

WHAT is probably the most modern asphalt plant now in use is located in New York City, in the residential and park district along East River Drive. Because of its convenient location, the old plant site was retained when a modern plant became necessary. The new buildings were designed for architectural suitability; the processes were thoroughly electrified—to eliminate soot, dust, and other objectionable features. The result is an attractive, clean, hygienic project powered, controlled, and process-heated electrically. It has capacity for a daily output of about 800 tons of high-grade street surfacing material. Provision has been made in foundations, etc. for additional units to increase the capacity to about 1100 tons.

General Electric's contribution was typical of the engineering service of our Company. District sales engineers, in co-operation with the General Office application engineers, worked with municipal officials through the contractor, to plan the best utilization of electric equipment. All the machinery—designed and installed by F. D. Cummer & Son Co., Cleveland—was G-E equipped.

Totally enclosed G-E fan-cooled motors drive machinery in the following processes:

1. Sand and stone, received by barge, are transferred in an electrically driven tunnel conveyor through an inclined tube to storage bins; then, again in conveyors to the mixing plant.
2. The liquid asphaltic cement, fuel oil, and limestone dust are all electrically pumped from barge to storage.
3. Bucket elevators move materials from mixers to reclaiming dryers, and then into the vibrating screens.
4. Under automatic, electric control, dry materials are mixed with the hot liquid asphalt for predetermined periods, and the finished product is then dumped into waiting trucks.



View of mixer flo during constructio Piping and surge ta are heated by G Calrod heaters an controlled with CR299 thermostats

Throughout this process, wherever liquid asphalt is stored or must be pumped through long pipes to the mixers, G-E Calrod heaters are used to keep i heated and flowing by holding the temperature a 300 F. Use of electric heaters exclusively has made extra piping unnecessary, avoided the need for steam heat and its attendant equipment, and reduced main- tenance expense. A total of 620 kw is used for process heating.

G-E engineers are quickly available to meet with construction men and make plans that will include the most modern electric equipment in keeping with the far-sighted projects of municipal officials. *Genera Electric Company, Schenectady 5, N. Y.*

GENERAL ELECTRIC

BUY WAR BONDS

655-42-153

The Week in Engineering and Construction

NGINEERING NEWS-RECORD • DECEMBER 7, 1944 • VOLUME 133 • NUMBER 23

Senate votes more funds for flood-control work

Bill passed by House is amended to increase authorized work from $810,000,000 to over one billion dollars, including 400 million for Missouri Basin

When the fight to authorize the con-versial St. Lawrence seaway project d to establish a Missouri Valley thority suddenly collapsed, the nate, Dec. 1, passed with major endments the Flood Control Bill . R. 4485) that the House had ap-oved May 9 of this year (ENR May 1944, vol. p. 719). Passage of the l followed when Senator Murray of ntana was promised that his pro-sal to establish an authority for the ssouri River basin would be given arate Senate consideration at an ly date and when Senator Aiken of rmont decided that he would seek to the St. Lawrence work approved er, perhaps by including it in the vers and Harbors Bill yet to be con-ered by the Senate. An important tor in Senator Aiken's decision was fact that he won his fight for a jor change in the flood control plans the Connecticut River, as will be ounted later.

Authorizations increased

Total authorizations in the bill were reased from $810,000,000, as passed the House, to over $1,100,000,000. is increase was made despite the fact t three projects favored by the De-rtment of Agriculture got big cuts. rly $5,000,000 being lopped from the ount approved for the Trinity River gram in Texas, over $2,000,000 from Little Tallahatchie River work in rida, and nearly $4,000,000 from the ount approved for the Washita River ershed in Oklahoma.

An important amendment written the bill by the Senate was one uiring any power developed at Army jects above that needed for opera-al purposes to be delivered to the partment of the Interior for disposal. wever, the latter agency is authorized construct and acquire only such transmission lines and related facilities as are necessary to make the power available in wholesale quantities.

An attempt to require sale at the source for power generated at federally financed dams constructed in the future was defeated. This action is looked upon as a serious blow against private interests in the issue of public versus private ownership. Moreover, there appears to be little chance for such an amendment to be added by the House, as this body defeated such a proposal when it debated the bill.

In regard to expansion of Army projects for irrigation purposes, the bill authorizes the Department of Interior to construct these added facilities, Congressional approval being necessary to start such work.

Missouri River work divided

As amended by the Senate, development of the Missouri River basin is to be done jointly by the Department of the Interior and the Army Engineers. A sum of $200,000,000 is provided in the Senate version for each organization. The House had provided $200,000,000 for the Corps of Engineers, but none for the Interior Department. However, the Senate limited navigation developments in the Missouri basin. It specified that the use of waters arising in the states lying wholly or partly west of the 97th Meridian, which includes Nebraska, Kansas, Oklahoma, Texas and the Dakotas, shall not conflict with any beneficial consumptive use in those states of the waters for domestic, municipal, irrigation, mining or industrial purposes.

Although projects already authorized and those approved in the bill now being acted upon are not affected, an amendment was added by the Senate making all other future Army and Reclamation projects subject to review by the state or states in which the projects are to be carried out. This provision is looked upon as an attempt to eliminate the claim that state rights are being absorbed by the federal government.

The outcome of the fight in regard to the Connecticut River work was an amendment restricting operations on the West River in Vermont—a Connecticut tributary—to construction of dams for flood control only. As now revised, the bill permits the Corps of Engineers to construct, at a cost not to exceed $11,000,000, eight reservoirs on the West River instead of the previously authorized Williamsville Dam, provided the eight dams make available at the mouth of the West River 75 percent of the control possible by the single structure. Construction of the Williamsville Dam has been actively opposed by Vermont.

Another amendment specifically states that the bill is not to be interpreted as authorizing a dam on the Ammonoosuc River in New Hampshire, and required further study and a reauthorization for four reservoirs in Vermont on the headwaters of the Connecticut.

In regard to work in the Lake Champlain basin, the Senate added an amendment approving modification of the existing Waterbury, Wrightsville and East Barre dams in the Winooski basin in Vermont in accordance with recommendations of the Chief of Engineers. This work is estimated to cost $2,120,000.

New England work outside of the Connecticut basin added by the Senate includes: A $1,070,000 project on the West River in Massachusetts; a $2,232,000 development on the Blackstone at Worcester, Mass., an $803,000 job on the Blackstone River at Woonsocket, R. I., and a small project on the Seekonk River at Pawtucket, R. I.

The Senate also changed the bill such that the $5,151,000 Housatonic River project require further study before it may be given final approval.

Other authorizations for work in the eastern part of the country added by the Senate includes $5,360,000 for the Mount Morris reservoir on the Genesee River in New York State. In addition the Department of Agriculture was

(*Continued on page* 15)

State highway engineers consider closer cooperation with local units

Extension of federal highway aid to cities and counties places new responsibility on administrators of the state highways

Principles to be applied in working with cities and counties under the expanded federal-aid highway program now being considered by Congress were among the major subjects discussed at the 30th annual meeting of the American Association of State Highway Officials held in Cincinnati, Ohio, Nov. 27-30. Under the postwar highway bills that were being put into final form in Congress as the association met, a large share of the federal aid going to each state must be passed to the cities for arterial streets and to the counties for secondary roads. This, it was observed at the meeting, means that the state highway departments must be prepared to work closely with the city and county street and road building agencies if the expanded federal-aid program is to be a success.

Federal-state relations

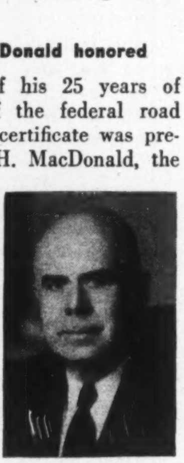
Governor John W. Bricker of Ohio, in welcoming the association to that state, expressed the hope that under the expanded program now being laid down the federal government would continue to exercise only such control over the funds made available to the states and their subdivisions as is necessary to obtain uniformity in policies of national interest. Subsequent speakers gave expression to like views, some adding that in passing federal funds on to the cities and counties, the states should apply the same home-rule principles that have characterized the federal-state relationship with respect to road funds in the past.

Samuel C. Hadden, president of the association, in his presidential address, paid tribute to men like Thomas H. MacDonald who have made the federal-state relationship a success in the years since the first federal-aid act was passed in 1916. Mr. Hadden pointed to the need for more federal aid in the future and to the need for continuing vigilance in defending the federal-aid principle against attack.

Mr. Hadden said that the half-billion dollars a year for the three postwar years that is provided in bills now before Congress is much less than the highway departments hoped to get, but that this was in part their own fault for not having more work ready for contract when Congress came to act on the pending highway bills. The rising national debt, Mr. Hadden added, is causing Congress to look with disfavor on large authorizations for road work.

Supplementary funds may be forthcoming in the future, Mr. Hadden said, but much will depend on the record made by the states in the first year after the postwar program gets under way, especially on the urban work included in that program. In handling the federal aid for that work and for the secondary road work the highway departments must demonstrate that they can be the coordinating agency for building up an integrated highway system in each state. This work may bring added glory, Mr. Hadden observed, but it also will bring added headaches.

Thomas H. MacDonald honored



T. H. MacDonald

In recognition of his 25 years of service as head of the federal road agencies, a special certificate was presented to Thomas H. MacDonald, the presentation being made by Fred R. White, who succeeded Mr. MacDonald as chief engineer of the Iowa Highway Department. Mr. White said that while Mr. MacDonald's position was primarily that of an executive he had always brought an engineer's approach to his problems. Further, in his 25 years of federal service he has demonstrated that it is possible for the states and the federal government to cooperate as equals.

In response, Mr. MacDonald pledged that while he remains at the helm he will continue to give effect to the spirit of the original federal aid act, whi was an arrangement that recogni the sovereignty of the states.

Mr. MacDonald expressed conce over recent efforts made before Co gressional road committees to und mine the present position of the st highway departments through propos that the federal government d directly with subdivisions of the stat He reinforced Mr. Hadden's stateme that the state highway departme must come to agreements with the citi and counties on the manner in whi the federal road funds will be d tributed to those local governm agencies.

Bartlett Award made

Another special feature of the me ing was presentation of the George Bartlett Award to Charles H. Purce director of public works of Californ This award would normally have been made this year at the meeting of the Highway Research Board but that meeting was cancelled.

C. H. Purcell

Presentation of the Bartlett Award was made by L. I. Hewes, chief Western Region, Public Roads Administration, w has long been associated with Mr. P cell. Mr. Purcell was appointed st highway engineer of California in 19 served as chief engineer of the S Francisco Bay Bridge Commission a more recently was a member of t National Interregional Highway Co mission.

Review and forecast

The fact that Thomas H. MacDona this year completed 25 years of servi as head of the Public Roads Admini tration and its predecessor, the Bure of Public Roads, was made the occasi for a review of what had been acco plished in those 25 years and an attem to indicate what future highway polici should be.

The review was opened with a pap by Senator Carl Hayden, chairman the Road Committee of the Senate, the history of federal-aid legislatio This paper was presented by Berna Touhey, state highway engineer

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Arizona. At the close of his paper, in aying his respects to Mr. MacDonald or the efficient way in which he had dministered the distribution of federal id, Senator Hayden laid emphasis on a oint that was later stressed by Mr. acDonald himself and other speakers, amely, the importance of a high order f administration in state highway departments.

State sovereignty maintained

R. H. Baldock, state highway engineer of Oregon, discussed the federal-tate relationship on federal-aid road ork. The chief reason for the success f the present system, he said, is found n the fact that the federal-aid act has een administered in the spirit in which t was written. A maximum amount of tate sovereignty has been maintained, nd the greatest amount of uniformity as been obtained while still recognizing that different regions require varying standards.

Looking backward, Mr. Baldock said hat he now wishes that the Bureau of Public Roads had insisted on wider ights-of-way in the early days. Concerning the apportionment formula, hich was such a controversial subject t last year's meeting, Mr. Baldock said hat a minority had opposed the method f apportioning used in the federal-aid ct since it was first written on the round that the major contributors were ot the major beneficiaries. This latter oncept, he said goes contrary to the asic concept of the use of tax monies n this country.

Better administration needed

Techniques of roadbuilding have outdistanced administration of state and ederal highway laws, said Thomas H. acDonald, in his comment on federal aid from a national viewpoint. Improvements in administration must be ade, he said, if roadbuilding is to ake the progress it should. Highway ork must be kept as free as possible rom the influence of selfish interests nd from political considerations. Much ore attention must be paid to personnel matters, and funds must be provided for research and to develop practical applications of the newer techniques.

Road work far behind

We are about three years behind in eeting our normal highway needs, Mr. MacDonald estimates. Consequently, that much work must be superimposed on operations required to meet urrent needs when road construction an be resumed. As of Oct. 1, the states ad completed plans for $400,000,000 f work. They also had plans under ay for additional work amounting to about one and one-half billion dollars and had a like amount in the "idea stage."

New A.A.S.H.O. president

Herman A. MacDonald, commissioner of the Massachusetts Department of Public Works, Boston, was elected president of the American Association of State Highway Officials at its annual meeting in Cincinnati. Mr. MacDonald has been head of the department since 1940. Previously he served as associate commissioner from 1928 to 1934. He has served as secretary to three governors of the Commonwealth, as mayor of Beverly, Mass., in 1912 and 1914, and as a member of the legislature in 1911-12.

Bachrach photo

Herman A. MacDonald

Commenting briefly on the projected Interregional Highway System authorized in the bills now in Congress, Mr. MacDonald said that the roads to make up the system could not be selected overnight, but must be the result of continuing study. Consequently, he urged the state highway commissioners to provide ample funds for continuing their highway planning surveys and for research, especially soil studies.

Cities need funds

Mayor Wilson Wyatt of Louisville in opening the discussion of future highway development from the city viewpoint, said it is fortunate that the cities can look forward to a period when the present critical condition will be corrected. Cities, generally, do not have funds adequate for the repair and modernization of their streets. In Louisville, for example, the city spends twice what it gets from motor vehicles to provide for those vehicles, yet what the city is able to provide is inadequate, and no consideration can be given to needed arterial streets.

Mr. Wyatt urged speed in the drafting of any local legislation needed to implement the highway work in cities authorized under the postwar road bills, and emphasized the need for speed in completing plans for such projects. He expressed the hope that federal funds would be made available for purchase of rights-of-way, otherwise many projects would have to be curtailed or eliminated entirely.

If the proposed system for carrying forward this expanded federal-aid program is to work, Mayor Wyatt added, the cities and counties must be given the same amount of home rule that the federal government allows the states. In the engineering work on highways through cities, for example, as much as possible of that design work must be turned over to the cities to enlist their cooperation and stimulate the initiative of their staffs.

County road projects

Like views were expressed by Otto Hess, engineer of Kent County, Mich., in discussing the projected secondary road work under pending postwar legislation. What happens in the next 25 years, he said, will depend in large measure on how successful the states and counties are in building of a satisfactory arrangement in the next five years.

Mr. Hess said he agreed with Mr. MacDonald as to the desirability of having federal funds for cities and counties pass to them through state channels, although some county authorities had attempted to by-pass the state highway departments. If a satisfactory arrangement can be set up, the counties will gain much from the administrative and technical experience of the state highway departments. They in turn may be able to help the states in carrying out the big program that is ahead.

Mr. Hess said that only about one-third of the 3,000 counties in this country have staffs adequate for the proposed work. Many counties have funds that can be used to match the federal funds made available to their states, thus increasing the amount or the rate at which the states can take up federal funds.

Overall planning needed

Viewing the proposed highway program from the position of the state highway departments, C. W. Phillips, commissioner of highways in Tennes-

(*Continued on page* 12)

"Break Through" on Costa Rican Highwa Expected Early Next Year

Early next year the force of United States roadbuilders at work on the Inter-American Highway in Southern Costa Rica hope to "break through" with a pioneer trail on the difficult 71-mi. project that carries the highway over the Talamanca mountain range. Most construction in Costa Rica on the highway was shut down about a year ago when the U. S. Army Engineer forces were taken away, but the U. S. Public Roads Administration forces remained behind to continue the central Costa Rica work and a few bridge jobs elsewhere along the road (*ENR* Oct. 14, 1943, vol. p. 565).

The 71-mi. project, which will connect the towns of Cartago and San Isidro, is considered the most difficult grading job in the 1,569-mi. length of the highway between Mexico and the Canal Zone. The work is located in an isolated area requiring long supply lines. Rugged mountain terrain is traversed, with most of the route located near the Continental Divide at an elevation of nearly two miles, which greatly reduced the efficiency of gasoline powered earthmoving equipment. In addition, the road cuts through dense jungle country where the annual rainfall is very heavy and the dry season is noticeably short. Last year only 28 days were free of rain.

Grades limited to 7 percent

High standards similar to those for primary road construction in the United States are being followed in constructing the finished highway. Grades are limited to 7 percent, and long sight distances are called for. A 20-ft. paved roadway is planned. At present an 8-in. water-bound macadam base is being laid and given a bituminous surface treatment. A 2-in. finished surface will be added after the major settlement has occurred.

To meet these standards, excavation for the 71-mi. project will total 13,000,000 cu. yd. of which 6 to 7 mil
yards have been moved to date in g
ing almost 50 miles and in push
through the pioneer trail for 13 a
tional miles.

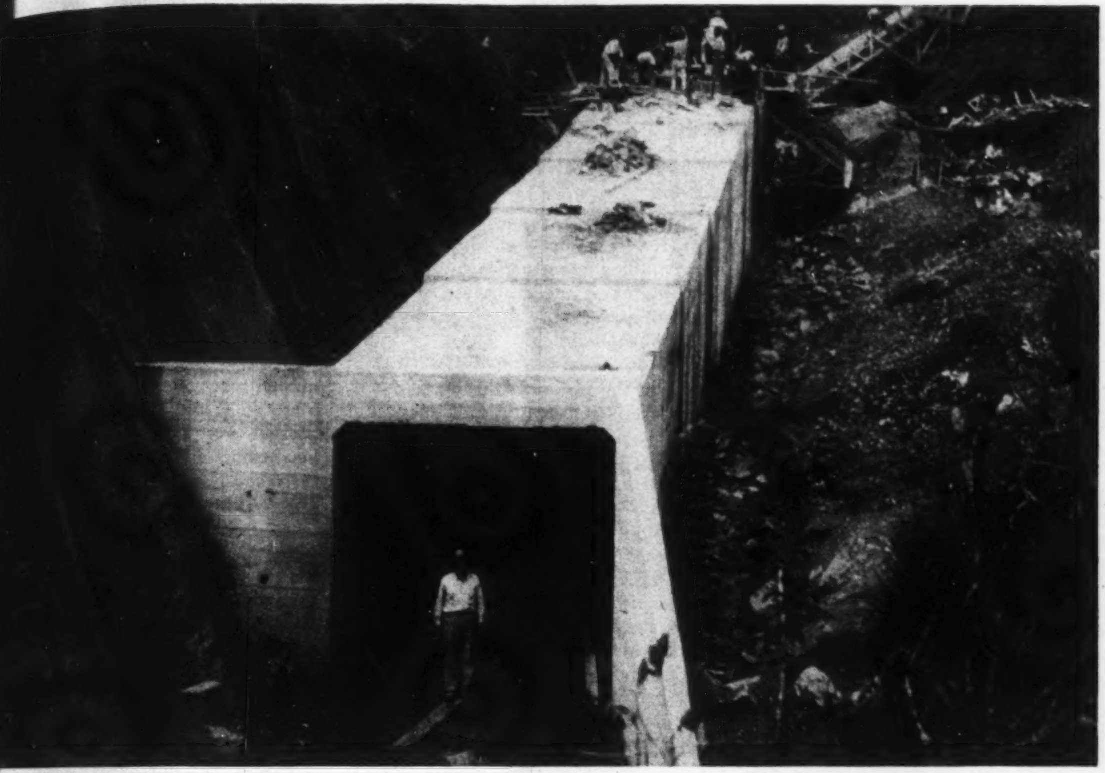
Both 4-in. courses of the macad
base have been put down on 15 m
and the first course for another 5 mi
Thus, after the "break through" of
pioneer road occurs, much work
remain to complete the project.

Present monthly material dema
for the job include 100,000 lb. of dy
mite and 10,000 bbl. of asphalt.
former is obtained from the Uni
States, as are reinforcing steel
cement for bridges and culverts, wh
the asphalt is supplied from the W
Indies.

Because it was impractical to g
access to intermediate points, ope
tions had to be carried out by work
from each end of the project. The
companying photographs show the c
struction methods being followed.

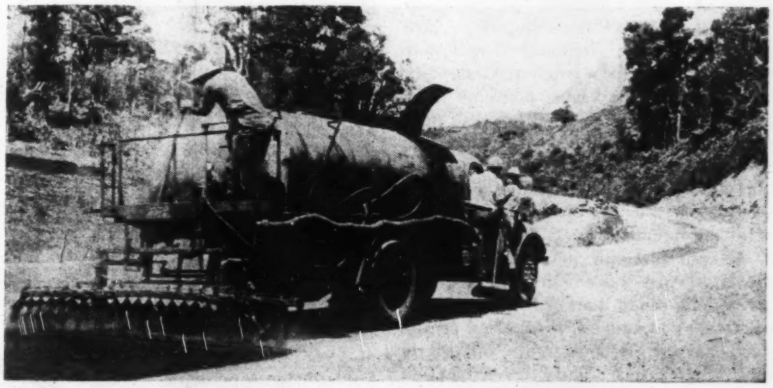
Public Roads Administration photos by

Cuts 100 ft. deep are not uncommon along the job. On this section a "pusher" bulldozer must be used in getting empty carrying scrapers back up the mountain side. Right: In the area where grading is now in progress much rock encountered. Shale, pumice, basalt and other volcanic formations are the more common types encountered.

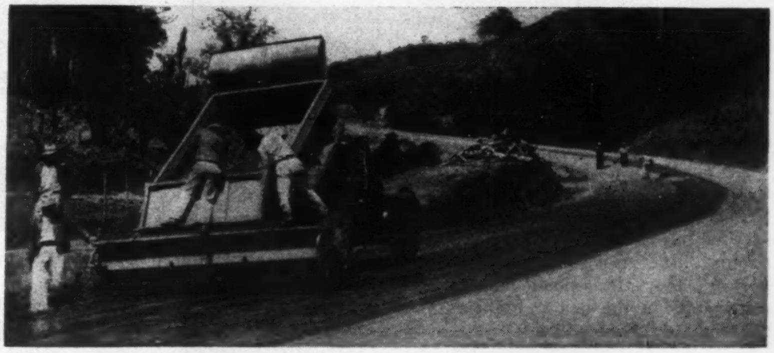


ly one bridge is required for the 71-mi. project, but culverts are numerous. The walls and roof of many of these ructures are progressively thickened toward the center where the depth of the fill will be greatest. Some culverts ver 300 ft. long are being built.

The greater part of the cost of the oject is being borne by the United ates from a $12,000,000 Congres- nal appropriation earmarked for the rk. Construction is being done by e Ralph E. Mills Co., Roanoke, Va., ith Clinton Wood superintendent. W. James is director of PRA's ter-American branch and M. L. rshberger is resident engineer for e PRA.



er the macadam base course, which of 8-in. minimum thickness, RC2 is plied at the rate of 0.6 gal. per yd. to provide a surface treatment t will protect the base until the aring surface can be added.



plication of asphalt is followed by lb. per sq.yd. of stone chips of 1/4-in. e. or smaller.

Labor, public relations chief topics at A.G.C. fall board meeting

Contractors at two-day session in Chicago discuss own problems and find construction is ready for postwar activity

With an ear cocked toward Washington to hear what Congress was doing to the highway and flood control bills, members of the governing and advisory boards of the Associated General Contractors of America held a meeting in Chicago Nov. 28-29 to thresh out industry problems and plan for the eventual resumption of peacetime construction.

Labor problem serious

Labor matters took a prominent place in the discussions, starting with a preconvention meeting of the A.G.C. labor relations committee, headed by E. P. Palmer of New York City. In summing up the labor situation in his report to the meeting, H. E. Foreman, managing director, declared that wage stabilization and other activities relating to the Wage Adjustment Board have occupied the greatest proportion of the association's time devoted to labor relations in recent months. He pointed out that developments in wage stabilization continue in the direction of greater enforcement of compliance in practically all parts of the country. Because enforcement and determination of sanctions to be levied for non-compliance are functions of the Regional War Labor Boards, Foreman warned the chapters and branches they must continue their efforts to place men familiar with construction at least on advisory panels, if not on the regional boards, so that the practices of construction may well be understood by the panels dealing with enforcement.

A serious trend in labor relations, declared Mr. Foreman, was pressure by unions other than A.F. of L. building trades to squeeze recognized craftsmen, as well as contractors, out of repair, alteration and reconstruction work in plants operating under agreements with labor not directly affiliated with the building trades. [An example is the recent action by Ford Motor Co. suddenly terminating a building contract at the request of C.I.O. because the contractor was using A. F. of L. building trades labor—Ed.]

Proposed basic agreement

The heavy and railroad contractors division of A.G.C. presented a tentative draft of a proposed basic agreement between the international unions and contractors in the heavy, highway and railroad field. Except in a few instances, existing basic agreements between international unions and contractors are for building construction, and trouble is being experienced because of unions attempting to apply provisions to work other than building.

The proposed draft calls for a recognition of the fact that "this class of construction is separate and distinct from building construction; and that the customs, practices, methods, usage, interpretation of labor classification and working conditions shall be common to those in heavy, highway and railroad construction as distinguished from building construction." The agreement would also provide that "no limitation shall be placed upon the amount of work which a workman shall perform during the working day, nor shall there be any restriction against the use of machinery or labor saving devices." Furthermore, working conditions and wage rates prevailing at the time of submitting bids would continue for the life of the project.

Because labor relations are growing in importance and make increasing demands upon the association and its Washington staff, ways and means were discussed for raising sufficient funds to augment the staff and to carry on these duties. The matter was referred to the finance committee.

Public relations program

Efforts for the past four years to establish a sound public relations program for A.G.C. have now materialized. Campbell-Ewald Co., designated as the association's advertising and publicity agency, now has a program in full swing. Duncan Price of the agency has been assigned as full-time A.G.C. representative. He and other agency officials outlined the work being done and presented plans for the future. A report of the association's public relations committee was submitted by chairman Dan W. Kimball.

Ready for postwar

That the A.G.C. is looking ahead to assist the country in transition from war to peacetime economy was evident from many discussions on this subject taking place at the meeting. Chapter secretaries and, in fact, all members present, were urged to go back to their local communities and hammer away at the idea of getting postwar plans ready now. William Muirhead, A.G.C. president, pointed out that war workers rather than war veterans, will comprise the chief job problem immediately after the collapse of Germany. He stated that probably 2,500,000 men will be released from the armed forces during the first year after the end of the European war, while, with the expected curtailment in war production, there will be thrown on the labor market between 4 and 5 million war workers during the same period. He went on to say that beyond any doubt the most critical time in the transition from war to peacetime conditions will come in the first six months following final victory. All war production will cease, workers in munitions and other war plants will be released in force, and demobilization of armed forces will reach about 500,000 to 600,000 per month.

"The general construction industry is ready to do its part in providing jobs for both these war workers and men returning from the war fronts," said Mr. Muirhead. "As 64 percent of the general

(*Continued on page* 16)

Piloting the Associated General Contractors through the period of transition from war to peacetime construction are H. E. (Doc) Foreman, managing director, Washington, D.C.; Wm. Muirhead, president, Durham, N.C.; and Harry A. Dick, vice president, Portland, Ore. Mr. Dick has been chosen president for 1945.

OUR ENGINEER ADMIRALS

Director, Atlantic Division, Bureau of Yards and Docks

REAR ADMIRAL JOHN J. MANNING, (CEC) USN

When the full story of the Normandy vasion can be told, it will show that e Seabees played a much larger role an the public has realized, and that Navy Civil Engineer Corps officer rried a great part of the responsibil- y for the execution of a vital part of at historic landing operation.

The officer is Rear Admiral John J. lanning, (CEC) USN, the same who, head of the Construction Department the Bureau of Yards and Docks from ecember, 1941 to November, 1942, con- ibuted so much toward the planning d development of the Navy's huge rogram of shore facilities in the days efore and immediately following Pearl larbor. As Bureau representative and ouble-shooter he came into intimate ontact with hundreds of engineers and ontractors, but despite the prodding, ushing and criticizing that he necesarily had to do, he made a place for imself in their hearts because they ecognized that both his energy and his ounsel were vital factors in helping hem to accomplish the impossible. No fficer of the Navy's Civil Engineer orps has more friends among civilian ngineers and construction men than as Jack Manning.

For the past two years he has been irector of the Bureau's Atlantic Division, which accounts for his presence in rance and, considered in connection ith his previous job, indicates that he as been fighting this war almost as ng as the Chinese. Nor is "fighting" o strong a term, for both of these asignments have had to be carried out in atmosphere of terrible urgency that as permitted no let-up either from xhausting toil or dangerous missions.

The title of "Director, Atlantic Divi-ion" rather suggests an armchair job with telephone service to all parts of the world. It is a faulty conception. What inter-continental telephones exist in his office are principally used by his Washington staff in trying to keep track of the Admiral himself. How much time he spends in the field is shown by the fact that of his first 610 days as director, 406 found him out of Washington. And he was still in France when that compilation was made!

Harris & Ewing
Rear Admiral J. J. Manning

In his present job, as in his last one, Admiral Manning is a field commander and a trouble-shooter, but in addition he has to be planner, administrator and morale-builder as well, for his men and his projects are far from home and from "top-side" advice, and he is their only direct connection with both. It is a tremendous responsibility which both his colleagues and his superiors say he is discharging in every particular.

Capabilities of diverse kinds contribute to Jack Manning's effectiveness, but none perhaps is more fundamental than his aptitude for sensing the crux of a problem and picking it bare for all to see and understand. He is particularly noted for dissecting long speeches and voluminous reports at a conference, and before adjournment coming up with a finished and workable plan for handling the problem under study. He has used this faculty time and again on his visits to naval bases where construction activities have mired down as a result of a multiplicity of problems such as lack of transportation, lack of personnel, lack of proper planning or even of a plan. After spending three or four days in the environment of the trouble, he calls a conference of all interested parties. One session is usually enough to produce a workable solution which has snapped everybody to attention and hurt where it should hurt, but has caused everyone to come out smiling and with new confidence in the future.

Born in Troy, N. Y., in 1894, and graduating there in civil engineering from Rensselaer Polytechnic Institute in 1915, Admiral Manning joined the Navy's Civil Engineer Corps as a lieutenant (jg) in December, 1917. From that day to this the Navy's shore facilities have been his ever-present concern. Moreover, in college he was a top ranking student, being elected to both Tau Beta Pi and Sigma Xi, so that behind his achievements is sound knowledge as well as wide practical experience.

After a brief period of training in

(*Continued on page* 10)

* * *

National construction organization proposed for postwar development

Semi-annual meeting of The Producers' Council hears plea for a united construction industry to assure maximum building program

A united front for the construction industry was proposed by Douglas Whitlock, president of The Producer's Council, at a joint luncheon held by the Council and the New York Building Congress in New York City, on November 29. By collecting and coordinating the best plans and presenting them to the government and to the public, a national organization, he said would insure maximum volume of building throughout the postwar years and could devise methods of reducing costs.

"We must work together," said Mr. Whitlock, "in building public appreciation of the value of new homes and factories and schools and highways, and a better appreciation of the contribution that our industry makes to the national welfare." He pointed out that the construction industry has not always had a united front, because it is composed of at least 500,000 separate units. As a result, they have come forward with a great variety of proposals, cure-alls and complaints. Those who wanted to encourage construction have been unable to figure out what kind of help was actually needed or wanted. By establishing the necessary machinery for conferring and working together on common problems, the construction industry could arrive at a practical and acceptable solution to the public housing question; defend the building industry against unfair attack and improve its public relations; work out ways and means of returning the responsibility for public works to local governments; and develop plans for reducing the cost of financing new buildings and public improvements.

No early work expected

Mr. Whitlock's proposal was made at the close of the semi-annual meeting of The Producers' Council, a national organization of building material and equipment manufacturers. At a previous session A. J. McComb, director of the new Construction Bureau of the War Production Board, said that there appears to be no possibility that wartime controls over civilian construction, which are keeping the industry virtually stagnant, can be rescinded prior to the ending of the European phase of the war. The government realizes that activity in the building industry has dropped below depression levels and is anxious to help relieve the situation at the earliest possible moment, but the industry cannot expect much change so long as the shortage of manpower in critical industries continues.

However, the Market Analysis Committee of The Producers' Council made the optimistic prediction that the volume of new construction during 1945 probably will be about $4.8 billion or 26 percent greater than in 1944, provided the war with Germany ends early in 1945 or before. But the estimate is subject to revision if the war in Europe lasts until the summer of 1945. Wilson Wright, economist of the Armstrong Cork Co., and chairman of the committee, placed the probable volume of new private construction at $2.8 billion and public construction at $2.0 billion for the 12 month period. The indicated volume of non-farm residential construction is $1.3 billion, including about $50 million of war housing, which would mean the building of about 300,000 new dwelling units. This compares with an estimated 200,000 units in 1944 and an average of 970,000 per year forecast by the committee for the five year period starting 12 months after the final end of the war. New farm construction is estimated at $275 million during 1945, public utility construction at $620 million, and highway construction at $665 million. Private non-residential building will be about $690 million, including $460 million for industrial construction. Military and naval construction is expected to drop to $400 million, a decline of more than 50 percent from the estimated $825 million in 1944. In arriving at these estimates, it has been assumed that WPB order L-41 limiting construction will be either revoked or greatly relaxed.

"Industrial construction during 1945," predicted Charles E. Young, supervisor of economic research of the Westinghouse Electric & Mfg. Co., "probably will total about $735 million of which about $460 million will be built by private enterprise, and then is expected to average about $845 million during the following five years."

Postwar home building will be greatly stimulated by the desire of families now living in the centers of cities and towns to move into the suburbs. W. B. Bober, economist of the Johns-Manville Corp., estimated that we will have to build 250,000 new homes a year for the next several years.

McHenry honored for research work

For the second time within six month Douglas McHenry, a U. S. Bureau Reclamation engineer of Denver, ha received world-wide recognition for hi scientific research work.

The Institution of Civil Engineers Great Britain has just awarded him th Telford Premium for his paper on " Lattice Analogy for Solution of Stre Problems," published a year ago i

Mr. McHenry is shown removing specimen from a triaxial concrete testing machine.

that society's reports. The Telford Premium, first given in 1837, is from a bequest left by Thomas Telford, founder and first president of the British Institution of Civil Engineers.

The American Society for Testing Materials, at its annual meeting in New York last June, presented Mr. McHenry the Sanford E. Thompson award for his paper on "A New Aspect of Creep in Concrete and Its Application to Design," published in the society's 1943 proceedings.

Mr. McHenry is in charge of special investigations in the Bureau of Reclamation's engineering control and research division. He joined the bureau's staff four years ago after extensive experience in engineering research, including six years with the Tennessee Valley Authority. Last June he was elected a member of the University of Colorado chapter of Sigma Xi, national honorary research society.

MEN AND JOBS

Edwin A. Fisher, city engineer emeri- of Rochester, N. Y., has been on job at his desk the city hall at ular hours daily ce his retire- nt 17 years ago NR, Dec. 23, 26, p. 1055). In ellent health at age of 97, he literally a "man work", actively rsuing his stud- of flood prevention and control. The pe of these studies is shown by the deral government's use of his report, epared since his retirement, on flood trol in the Genesee River valley.

Mr. Fisher was appointed city engi- er of Rochester in 1896, prior to ich he had been actively engaged in il engineering for some 26 years, ee of which were as assistant chief gineer for the city.

Lieut. Col. Lloyd L. Stanley, of Law- nce, Kan., on duty with the Third rvice Command engineers' office, ltimore, Md., has been retired from my service because of age.

Colonel Stanley served with the Army gineers during the last war, and later d army construction work for the CC. In 1940 he was called back into rvice as constructing quartermaster, pervising construction of Camp San is Obispo, Calif. He was transferred the Third Service Command in arch, 1942.

Carl Martini, an employee of the Chi- go bureau of engineering for 38 ars, retired recently. Mr. Martini was gineer in charge of contracts at the me of his retirement.

Bob Johnson, of Knoxville, Ia., has en appointed county engineer of ardin County, to succeed C. A. Boeke, ho recently resigned to become city gineer at Fort Dodge. Mr. Johnson d been county engineer in Marion ounty for 21 years, and for the last o years, has been engineer for the ty of Knoxville.

B. N. Egan, assistant chief highway gineer of Kentucky, recently an- ounced his resignation. He plans to nter the coal mining business.

Winfred D. Gerber, engineer for the linois State Water Survey at the University of Illinois, has announced his retirement after 16 years of service. He went to the University of Illinois in 1928, following over 30 years' work for railway and industrial organizations. He was graduated from the University of Illinois in 1899 with his major in municipal and sanitary engineering and later took the master's degree as a civil engineer. His chief duties have been to determine the chemical quality and the usability of water for engineering and industrial purposes.

George D. Wright, Jr., former construction engineer for the Houston Shipbuilding Co. at Houston, Tex,, has been promoted to first lieutenant in the Air Corps. He is now in the European theater.

Lieut. Col. Sheridan E. Farin, who received his civil engineering degree from the University of Minnesota and practiced engineering before entering the Army, now is stationed at Camp Butner, N. C., with the 914th Field Artillery of the 89th Division.

Lieut. Comdr. W. F. Weaver, who for the last two years has served as assistant public works officer at Charleston Navy Yard, S. C., is leaving for overseas duty. **Lieut. Comdr. R. B. Krum** will take over his post.

Placed in charge of the $28,000,000 construction work for Indiana Ordnance Plant, Charlestown, **Maj. H. A. Savigny,** U. S. Engineers, has reported for duty. He was transferred from Ft. Belvoir, Va.

Maj. Gen. H. F. G. Letson, engineer, has been appointed commander of the Canadian Army Staff at Washington. He has been Adjutant General at National Defense Headquarters in Ottawa for the last two years; previously, he was Canadian military attaché in Washington.

Louis Emerson Lee of West Islip, N. Y., has been promoted to lieutenant colonel, at AAF Training Command Headquarters, Ft. Worth, Tex.

A member of the staff of Lieut. Gen. Barton K. Yount, commanding general of the Training Command, Lieut. Col. Lee serves as supply section construction unit chief for a nationwide network of AAF schools in which individual training is given for pilots, bombardiers, navigators, gunners and 65 categories of aviation technicians. A 1927 engineering graduate of Yale University, he was partner in the New York engineering construction firm of E. W. Howell Co. before entering the service as a captain in June, 1942.

Winnipeg, Man., has made the following appointments: Engineer of roads and streets, **C. Keeping**; construction engineer, **C. Deering**; maintenance engineer, **W. A. C. Orr**; inspection engineer, **A. Sandilando**; and waterworks engineer, **N. Bubbis.**

Maj. Bernt O. Larson of Chicago, Ill., is instructing Chinese engineers in American techniques of bridge building and demolition. He arrived in China in January, 1944, and was assigned to Y-Force, the American liaison organization which trained and supplied the Chinese expeditionary force for the Salween campaign. For several months he was a district engineer on the Burma Road. He received his degree of bachelor of science in civil engineering from the University of Illinois in 1938. He spent four years at the university as an instructor and as a post-graduate student in engnieering, working for the state water survey during his spare time.

Maj. J. C. Bisset has been promoted to lieut. colonel in the Corps of Engineers. He has been post engineer at New Orleans and its sub-posts for the past year. Before going into the Army, Col. Bisset was assistant director of Public Works in Dallas, Tex.

Col. Homer B. Pettit, commander of the desert district in the Persian Gulf Command, has been assigned as district engineer for Boston's engineer district, according to a recent announcement by Col. G. W. Gillette, New England Division engineer.

Colonel Pettit served in France in World War I and during the occupation of Germany, later in Panama, Kansas and at Michigan College. He was district engineer at Detroit from 1937 to 1940, previous to which time he was in charge of Mississippi River flood control work in the St. Paul, Minn., district. In July, 1943, he was given an assignment overseas as commanding officer, 334th Engineers Special Service Regiment, and later, as commanding officer of the desert district, Persian Gulf Command, from which command he now goes to Boston.

Our Engineer Admirals
Rear Admiral Manning

(*Continued from page* 7)

the Naval Academy in 1918, Admiral Manning was sent to Guantanamo Bay, Cuba, where he served in the public works department of the U. S. Naval Base until late 1920. There followed similar assignments at Brooklyn, at New York City, and at Bremerton, Washington, and then in 1927 he began a three-year trick as public works officer for the various Navy shore facilities in the Newport, R. I., area.

Next, after three years in the public works department at Pearl Harbor, he returned to the United States to take on an assignment at the headquarters of the Fourth Naval District in Philadelphia. In that job until September, 1936, he was promoted to be public works officer not only of the Fourth District but of the Philadelphia Navy Yard as well.

Although it could not be known at the time, this ended his round of routine assignments, for in September, 1937, he went to the Bureau of Yards and Docks in Washington as head of the Fleet Facilities Division, and in December, 1941 became director of the Construction Department, one of five Bureau departments established at that time. Admiral Manning was thus the first Director of that department, and served in that capacity until November, 1942, when he became Director, Atlantic Division, Bureau of Yards and Docks of the Navy.

In his present job, Admiral Manning has crossed the Atlantic more times than he has counted, mostly by air. One month it would be South America, Trinidad, Puerto Rico and our operations throughout the Caribbean, the next, Newfoundland, Iceland and the British Isles. In all of this travel he has continued to make new friends, to cement old ones, and to inspire them all to greater endeavor and lasting accomplishment.

For contributing "materially" to the success of the Allied invasion of France, Rear Admiral Manning was awarded a Bronze Star Medal by Admiral Harold R. Stark, USN, Commander, U. S. Naval Forces in Europe, for whom he acted as a special adviser. The citation read in part:

"Rear Admiral Manning, with outstanding professional skill, served over a prolonged period as a special adviser in connection with engineering projects of a nature vital to the success of the Allied invasion of France. In the performance of his duties it was necessary for him to consult and maintain the closest liaison with representatives of the United States Army, the British War Office, the Allied Commander and various engineering and construction agencies of the United Kingdom. In maintaining these contacts, he showed great energy, zeal and initiative, and his participation in the engineering phases was characterized by vision, mature judgment and sound professional experience of the highest order.

It is considered that Rear Admiral Manning contributed materially to the success of the Allied invasion, and that his outstanding performance of duty reflects great credit upon the United States Naval Service."

Officers needed for Navy's Seabees

The Navy needs immediately about 500 engineers of executive caliber to officer new Construction Battalions now being formed for operations in advanced areas. All classes of technical men are required, with emphasis on civil engineers for building and maintaining operational bases in the Pacific.

The work will offer diversified construction training in all of the phases of engineering required to handle and store supplies, provide housing, sanitation and recreation facilities and build airfields for the offensive against Japan.

Commissions are available in several grades. Interested persons are asked to contact directly any of the offices of Naval Officer Procurement named below:

ATLANTA 1, GA., 721 Healey Bldg.
BOSTON 14, MASS., 150 Causeway St.
CHICAGO 4, ILL., 141 West Jackson Blvd.
CINCINNATI 2, OHIO, 617 Vine St.
DETROIT 26, MICH., 1249 Washington Blvd.
KANSAS CITY 6, MO., 1009 Baltimore Ave.
MINNEAPOLIS 2, MINN., Northwestern Bank Bldg.
LOS ANGELES 13, CALIF., 411 W. Fifth St.
SAN FRANCISCO 3, CALIF., 703 Market St.
NEW ORLEANS 12, LA., 611 Gravier St.
HOUSTON 2, TEX., Niels Esperson Bldg.
NEW YORK 5, N. Y., 33 Pine St.
PHILADELPHIA 7, PA., Widener Bldg., Juniper & Chestnut Sts.
PITTSBURGH 22, PA., Keystone Hotel Bldg.
RICHMOND 19, VA., Fifth & Cary Sts.
SEATTLE 4, WASH., 117 Marion St.
WASHINGTON 25, D. C., 1320 "G" St., N. W.

Half billion for shell plants approved by W

A half-billion-dollar building
gram to increase facilities for mo
ammunition production was discl
in Washington Dec. 2 by J. A. K
chairman of the War Production Bo

No other solution than the buil
of additional facilities had been fo
for solving the infantry mortar amm
tion problem, the WPB chairman
and his agency therefore had appro
the $500,000,000 building prog
which would be started at once.

November output of heavy-artill
shells, Mr. Krug said, should sho
substantial increase.

"As long as the 'big push' on
Westwall continues," he added, "
day's shell production will add
more day to the sustained attack on
Westwall and make more certain
eventual break-through there."

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Ft. Worth-Dallas expre highway is studied

City, state and federal highway
cials are studying a proposed $61,0
000 highway to connect Fort Worth w
Dallas, Tex., under a plan recen
recommended by the New York firm
Parsons, Brinckerhoff, Hogan & M
donald, consulting engineers.

The 42.7-mile expressway would fo
part of the national inter-regional s
tem of roads, expediting traffic both
and through the two principal cities
north Texas. It would be part of U.
Highway 80, a transcontinental route

The plan calls for a right-of-way
block wide through each city, with
traffic lanes inside the city limits a
four lanes between the two cities. Tra
fic would be separated by a 10-ft. m
and there would be no traffic signa
along the route. Cross-traffic would
routed through underpasses or ove
passes, with access gained to the e
pressway via various modifications of
cloverleaf intersection design.

Most of the expressway would
slightly below ordinary street level;
greatest grade being less than 5 percen
and for a short distance in Dallas t
road would be elevated to avoid inte
ference with an industrial area. T
highway would be available for use
buses, trucks and other vehicles.

The Dallas portion is estimated
cost $19,750,000, which compares with
$12,000,000 plan earlier recommend
by engineer Harland Bartholomew f
a similar route, part of the city's mast
plan. Of the total cost $1,800,000 wou
go for engineering, $13,500,000 for land
and about $45,500,000 for constructi

illion dollar national airport plan s presented to Congress

ivil Aeronautics Administration recommends construction of ,050 new airports and improvement of 1,625 existing fields

he Secretary of Commerce sent to gress last week a national airport prepared by the Civil Aeronautics inistration in response to a resolu- passed June 23 by the House of resentatives. The resolution was in- luced by Representative Clarence , Chairman of the House Interstate merce Committee.

he report recommends construction of 3,050 new airports and improvement of 1,625 existing fields, at an estimated cost of $1,021,567,945, as listed in the accompanying table, for clearing, grading, paving, lighting and radio facilities, plus about $230,000,000 for land and buildings other than hangars.

A system of federal aid, with matching of funds by the states, was proposed for financing the construction over a period of five to ten years. An immediate appropriation of $3,000,000 to cover the cost of surveys and other preparatory work was asked. The present study lists the communities where airports should be constructed, and the number and classes of such airports, but does not indicate specific sites.

The program calls for construction or improvements to increase the number of Class 1 airports, those designed primarily for personal flying, from 981 to 2,597; Class 2 fields, suitable for feeder airlines as well as personal flying, from 810 to 2,198; Class 3, which accommodates present-day twin-engine aircraft, from 443 to 654; Class 4, serving larger aircraft now in use, 403 to 520; and Class 5, for long-range domestic or foreign operations, 305 to 336.

The report points out that while the $400,000,000 national defense landing area program conducted by the CAA since 1940 has been the chief factor in increasing the number of Class 3 or better airports from 57 to 1,094, deficiencies still exist at 174 locations now designated for aircarrier service, and at 585 places to which airlines propose to bring service.

In preparing the survey, population, trade, mail, airline, traffic, route applications, and many other economic and geographic factors were considered.

STIMATED COST OF NEW AIRPORTS AND IMPROVEMENTS TO EXISTING AIRPORTS OF ALL CLASSES

ATE	Improving Exist. Airports		Proposed Airports		Exist. Airports with no Improvements	Total, All Airports at Completion of Proposed Plan
	No.	Cost	No.	Cost		
.	27	$6,205,000	*35	$5,980,000	48	*110
z.	15	3,079,330	*44	7,855,810	63	*122
.	25	13,195,889	65	21,913,745	20	110
if.	137	19,018,520	174	37,893,980	114	425
o.	31	7,663,000	36	4,515,000	22	89
n.	11	4,707,000	26	11,643,000	11	48
.	7	1,540,000	11	1,144,000	6	24
C.	....	——	——	——	3	3
.	48	13,694,200	57	10,040,430	144	249
	17	3,975,000	50	5,335,000	51	118
ho	28	5,517,300	23	3,568,000	23	74
	55	22,445,000	105	17,631,000	32	192
.	28	7,762,000	68	8,270,000	28	124
va	28	4,143,500	80	5,808,000	22	130
n.	42	4,146,000	76	3,586,000	34	152
.	14	2,141,000	76	5,724,000	14	104
.	35	15,084,073	63	25,533,817	15	113
ine	24	6,806,000	43	12,759,000	6	73
.	7	1,507,000	64	12,558,000	19	90
ss.	26	15,429,000	35	14,502,000	29	90
ch.	80	14,627,000	92	8,186,000	41	213
nn.	36	7,856,000	114	3,880,000	9	159
ss.	22	5,995,000	51	4,745,000	38	111
o.	32	9,336,500	71	9,586,500	26	129
nt.	52	7,350,700	24	3,122,400	25	101
b.	37	3,336,000	54	5,488,000	20	111
v.	24	3,515,800	30	1,236,300	19	73
H.	14	6,005,000	25	8,929,000	2	41
J.	24	9,406,940	59	22,561,840	26	109
M.	28	10,620,806	52	22,395,788	41	121
Y.	60	22,632,795	*122	35,958,100	69	*251
C.	34	9,333,000	55	10,443,000	33	122
D.	18	2,206,000	55	1,816,000	14	87
io	77	15,416,000	129	15,745,000	27	233
la.	43	16,945,335	89	20,355,105	52	184
re.	22	2,943,000	33	3,636,000	28	83
.	76	20,179,000	131	26,488,000	64	271
I.	7	1,852,000	11	3,217,000	1	19
C.	12	2,434,000	40	10,403,000	36	88
D.	14	2,662,500	26	2,068,000	15	55
enn.	20	4,182,000	55	8,960,000	12	87
exas	123	52,490,731	213	68,432,421	196	532
tah	19	3,298,280	54	8,822,510	14	87
t.	10	3,034,000	25	9,833,000	2	37
a.	30	7,658,000	103	15,581,000	33	166
ash.	37	7,273,000	42	12,885,000	39	118
. Va.	12	4,550,000	73	24,099,000	12	97
is.	33	12,172,000	81	5,772,000	15	129
yo.	24	2,113,500	10	1,358,500	17	51
Totals	1,625	$429,303,699	3,050	$592,264,246	1,630	*6,305

* Includes Airports Under Construction by Other Agencies.

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No flight strips funds in postwar highway bill

In the report in last week's issue reporting passage by the House of Representatives of the 1.5 billion dollars postwar highway bill (HR 4915) two errors occurred. It was reported that the House version of the bill permitted the use of federal funds for construction of flight strips adjoining highways. At the last minute this provision was stricken from the measure.

The authorization for access parkways to national park areas was finally set at $10,000,000 and not $5,000,000 as reported.

Two authorizations not mentioned in last week's report were $6,000,000 for highway work over Indian lands and $1,500,000 for highway operations in Alaska.

◆

Barriers which have cut off more than a mile of the Canadian scenic highway around Niagara Falls, isolating the main power plants from public access as a war measure, have been removed. The armed guards patrolling the barriers and guarding all power plants have also been withdrawn.

Highway officials meet in Cincinnati

(Continued from page 3)

see, said that the plan will work if state, county and city authorities will recognize that the roads or streets under the charge of each authority are, after all, only part of a system that must be closely integrated to be efficient. Once this is recognized, funds should be apportioned among the three elements in such a way as to provide for a logical development of each element. Also, agreement on an overall system will facilitate successful resistance to pressure groups favoring one part over another.

Group discussions

All of the second day of the meeting and the morning of the third day were given over to group discussions under the direction of the several committees of the association. These discussions included current maintenance and operating problems, personnel, public relations, road and bridge design, materials, roadside development and highway administration. Notes on several of these conferences follow. Others will be given in a subsequent issue.

Too much right-of-way

Active discussion developed around papers by W. K. Beckham of South Carolina and L. F. Johnson of New Hampshire concerning the maintenance of wide rights-of-way. Mr. Beckham questioned the soundness of the policy of taking wide rights-of-way that now is being advocated by many and is called for in tentative plans for the projected Interregional Highway System. He favors taking easements where it seems probable that more land may be needed at a later date. Rights-of-way extending considerably beyond present requirements withdraw much land from cultivation and add materially to the cost of maintenance. South Carolina enters into agreements with farmers for the cultivation of wide rights-of-way in agricultural areas. In forested areas they do not clear more land than is needed for current operating needs.

New Hampshire, said Mr. Johnson, encourages the growth of native plants and shrubs and does not check forest encroachments that do not come within about 20 ft. of the side ditches. They do not mow frequently as frequent mowings discourage the native plants. Maintaining a grassed area about 20 ft. wide costs $50 to $70 a mile. Formal planting in rural areas is not favored as it adds to maintenance costs and the imported trees do not survive as well as native ones.

Minnesota also opposes the so-called landscaping of its highway rights-of-way according to C. L. Motl, chiefly because the clumps of shrubs of trees greatly increase the hand work in mowing. They now take a minimum right-of-way of 150 ft. which they seed with grasses that farmers can cut.

W. H. Root of Iowa also expressed opposition to taking wide rights-of-way in fertile areas. Iowa is taking easements for the land required for post-war projects, letting farmers cultivate the land until the state is ready to exercise its options.

Surplus war equipment

In a review of factors affecting the disposal of surplus war equipment of use to the state highway departments, R. H. Baldock, chief engineer of the Oregon Highway Department, cautioned against paying out good money for more of that equipment than would be necessary for the reconversion period. The plan set up in the Surplus Property Act is visionary in his opinion and the objectives sought are conflicting. He expects to see the government set out to meet some of those objectives, such as that of getting a fair price for the equipment, but in the end he expects to see equipment prices go down rapidly once the government realizes how much it is going to cost to store and maintain the equipment in serviceable condition.

Much equipment needed

Highway departments, Mr. Baddock reported, will be in the market after the war for $55 million new equipment and will need about $15 million each year thereafter. Nevertheless, if all these purchases were made from the surplus that is expected to be in the federal government's hands at the end of the war they would make little impression on the supply, it is so large. The plan to put the surplus properly in widely scattered depots may help in moving it, but the cost of operating such depots is bound to keep down the number that will be established, Mr. Baldock believes.

Transport regulation

Highway departments are permitting truck operators to get away with murder, murder of their highways, according to W. M. Williams, director of the planning and traffic division of Colorado. Studies made there show that private passenger car owners are subsidizing the truck operators, especially the operators of large trucks. On a weight basis, passenger car operators pay the state more per pound than do the truck operators.

Mr. Williams urged that the Committee on Highway Transport be instructed to make a study of motor vehicle fees which would be a guide to the states in setting just fees. He recommended also that the same committee make a study of the relation of freight rates charged by truckers to fees paid. In Mr. Williams' opinion state laws should be amended to provide for more uniformity in regulation. The truckers and truck builders are entitled, he said, to much more uniformity than there is at present.

Mr. Williams stressed the importance of early agreement by the states on size and weight limitations. Truck operators, he said, are well organized to get their ideas as to limits on size and weight should be written into state laws, if not into national laws.

Some flexibility proposed

In discussion of Mr. Williams' paper there was quite general agreement as to the need for size and weight limitations except on the part of a few state representatives. Ivan J. Hilton, chairman of the New Mexico commission, said that too definite limits on size and weight of trucks would serve as a check on progress. He favored a considerable amount of flexibility. In support of his views he cited the great increases in weights of rail that the railroads have found necessary to make in the past 25 years to carry the much heavier equipment that they have built in the interest of more economical operation.

Permits for heavy equipment

The subject of truck regulation came up again at a later session during the discussion of a paper by W. W. Mack, chief engineer of the Delaware Highway Department, on permits for hauling heavy equipment. Mr. Mack said that present restrictions on heavy loads are widely disregarded, loads up to 100,000 lb. being not uncommon in his state. He believes that fees for hauling heavy equipment over state highways should be high enough to discourage such movements and at the same time compensate the state for possible damage.

H. O. Schermerhorn said that the most common offenders in New York State are contractors hauling large shovels for long distances to save freight. New York requires a permit for such hauling but charges no fee. He favors a fee high enough to make it profitable for contractors to move heavy equipment by rail.

Colorado's system of charging a rising scale was cited by Mr. Hilton as a possible solution. In New Mexico the legislature has kept the highway department from making such charges, but in actual experience the damage has not been as serious as Colorado authorities anticipated when they wrote their law.

Experience in Utah in hauling heavy supplies into a new steel mill was recounted by John S. Evans, chairman of the commission. There, the commission had sanctioned the use of heavy trucks over an old concrete highway that presumably would be badly damaged by trucks of that size. Their reason for doing this was to reduce the traffic hazard on a heavily travelled road by cutting down the number of trucks. Actual experience demonstrated that the big trucks did less damage than smaller trucks. Fewer trips were required and the drivers of the large trucks were more careful, especially about running off onto the shoulders of the narrow pavement.

Truck designers' problems

Another aspect of this question was presented by B. B. Backman, vice president of the Autocar Co., speaking for the Automobile Manufacturers Association, and taking for his subject the truck of the future. The most significant impression gathered from Mr. Backman's talk was that, to truck builders, a somewhat greater truck width is more important than higher axle loads. By use of diagrams, Mr. Backman showed that the 96 in. width that is common to most states makes it impossible to use tire sizes that are economical for current loading and speeds without reducing the frame width below practical limits over the wheels. Mr. Backman would like to see the width limit raised to 102 in.

Mr. Backman said that no valid argument could be made against regulation of size and weight, but he urged that the limits be not frozen. Neither the art of highway design nor of vehicle design has, in his opinion, progressed to the point where freezing is desirable.

Asked by Mr. Mack whether the trucking industry will accept an axle limit of 18,000 lb. if they get the 102 in. width they are seeking, Mr. Backman said he was not in a position to answer that question, but added that the manufacturers could build a vehicle that would be economical to operate within those limits.

A rational method for distributing federal-aid funds among state highways, city streets and county roads was presented by T. H. Cutler, chief engineer of the Department of Highways in Kentucky. According to Mr. Cutler, a formula for such apportionment must include: (a) measurement of need for roads and the funds with which to build them; (b) measurement of changes in need; and (c) recognition of differences in cost of construction and maintenance of road types needed to give proper service. Factors frequently used but classified by Mr. Cutler as unsuitable are: equal division, area, population, assessed valuation, motor vehicle revenues and vehicle miles of road use. Suitable factors he gave as: (a) mileage of state highway, county trunk and arterial city-streets, and (b) motor vehicle registration. Of these, he considers that trunk mileage is the outstanding factor for measuring real highway needs. The weight given to each factor, Mr. Cutler added, would vary in different states. He would give it 75 percent in Kentucky, based on the planning surveys.

Changes in need, Mr. Cutler said, would be indicated by motor vehicle registrations.

Allowing 5 percent for administration, Mr. Cutler would allocate highway funds in his state as follows: Administration, 5 percent; trunk mileage, 75 percent; motor-vehicle registration (between the state and cities with over 5,000 pop.), 20 percent.

Actual mileages of the different types of roads and streets would be multiplied by factors to convert them into equivalent mileage of two-lane standard highways.

Expanded activities

Samuel C. Hodden, president of the association, in his annual report on the association's activities, noted with satisfaction that they have been expanded under the direction of Hal Hale, who took up his work as executive secretary on Jan. 1 of this year. Much of Mr. Hale's time during the year had to be devoted to the postwar highway legislation, but he had been able to inaugurate improvements in the association's journal, *American Highways*, and in its bulletin service.

Mr. Hale reported that the association's revised specifications for highway bridges will be out in December unless new printing troubles arise, and that a new policy statement—that on grade separations—also will be out soon.

Attendance at the meeting, Mr. Hale said, totaled 739, including 40 ladies and 178 men from the Ohio department.

Special action planned

In resolutions adopted at the closing session the association urged the War Production Board to relieve the critical condition in which many highway departments find themselves by making available to them such equipment and repair parts as can be released without injury to the war effort.

A second resolution called on Congress to give continued support to construction and maintenance of Inter-American Highway and the Alaska Highway. This resolution was adopted with only a few feeble noes being heard in an audience that had dwindled to about 100.

Another resolution called on the executive committee to inaugurate a study of size and weight restrictions with the object of recommending standards to the states; and a fourth resolution put the association on record as opposed to the proposal of the Bureau of the Budget that highway statistics be compiled on the basis of the federal fiscal year rather than a calendar year.

New officers

Herman A. MacDonald, commissioner, Massachusetts Department of Public Works, was elected president to succeed Samuel Hadden of Indiana. Hal G. Sours of Ohio was elected first vice-president. Regional vice-presidents elected were: E. B. Whitman of Maryland; C. W. Phillips of Tennessee; W. W. Polk of Illinois; and Burwell Bantz of Washington. G. H. Henderson of Rhode Island was reelected treasurer and Thomas H. MacDonald and Thomas H. Cutler were added to the executive committee.

Western officials meet

An informal discussion of the proposed Interregional Highway System and election of officers were the order of business at an evening session of some 40 delegates of the Western Association of State Highway Officials representing the 11 western states and Texas. In general, the proposed locations, for the interregional highway throughout the West are looked upon with favor by the several states, although some are of the opinion that certain other sections of highways are of equal or greater importance and therefore should receive equal attention.

For the first time since its organization, the Western Association of State Highway Officials will be headed by an official of the Public Roads Administration. In a stirring demonstration of the close cooperation and friendly relations existing between these two agencies, W. H. Lynch, district engineer of the PRA at Portland, Ore., for the past 18 years, was unanimously elected president of the W.A.S.H.O. for the forthcoming year. He succeeds Fred J. Grumm, assistant state highway engineer of California.

Other newly elected officers include: DeWitt C. Greer, Texas, vice-president; W. L. Anderson, Utah, secretary-treasurer; and F. G. Healy, New Mexico and J. R. Bromley, Wyoming, members of the executive committee.

A continuation of this report will be given in a subsequent issue.

BRIEF NEWS

The Connecticut State Highway Department has obtained a ruling from the War Production Board that will permit road jobs up to $10,000 not requiring materials or equipment essential to war production. An allocation of $200,000 has been obtained from the State Finance Advisory Board to undertake 12 projects in the Bridgeport-New Haven area.

Enforcement of an ordinance prohibiting cross-connections with city water mains in Pittsburgh, Pa., is being delayed pending action on an ordinance proposed by the Building Owners and Managers Association. The proposed ordinance would allow cross-connections properly protected against backflow of private water into the city mains, a condition resulting from private pumps being stronger than city water pressures. Cross-connections between private wells and municipal supply lines were in use by 58 large plants in downtown Pittsburgh. The present ordinance resulted in the removal of 14 of these; 6 others are being removed and notices for the removal of the remainder have been issued.

Construction of more than 250 miles of highways at a cost of nearly $10,000,000 is planned for Nevada during the 3-year period immediately after peace, it was disclosed recently by Robert A. Allen, director of the state highway department. He said that the department will be ready to advertise for bids as soon as hostilities cease and federal approval is granted. It is expected that about 87 percent of the proposed expenditures will be with federal aid.

Highway Engineer Howard Holmes of Montana has announced that an audit of highway department funds indicates that his state will be able to launch a $7,300,000 road construction program as soon as wartime restrictions are lifted. The total is based on unobligated balances of prewar appropriations and is in addition to $5,000,000 expected under postwar government appropriations.

New buildings in Mexico in 1943 cost $20,000,000 and it is expected by government officials that this year's figure will top $28,000,000:

Because of forfeiture for delinquent taxes amounting to $700,000, Pittsburgh, Pa., has been able to acquire for $222 a piece of property once valued at $1,100,000. It may be used for the proposed new city hall.

The city council of Rochester, N. Y., has asked the state for financial aid in preparing plans for $8,357,000 of postwar construction. The proposed jobs include a new city hall and a sports auditorium, each to cost $3,500,000. Councilmen said that the request is made now to take advantage of the offer of the state to pay one-half of the cost of preparing plans. The city would pay for the city hal but money for the auditorium would b raised by public subscription.

The Seattle, Wash., board of publi works has approved a revision of th standard plans and specifications covering all types of construction. The ne code will take effect Jan. 1, 1945. Ther will be no drastic alterations from th present code, according to City Engineer C. L. Wartelle. This is the fift time the code has been revised since it original adoption. The last revision wa in 1932.

Wide World photo

Australian power is obtained from new Kiewa dam

Part of a vast plan which has been developed by the State Electricity Commission of Victoria, Australia, to harness the snow waters of the Australian Alps, this recently completed dam is furnishing the first power of the Kiewa project. At present 12,000 kw. is being generated for use of war industries in the first large-scale power station in Victoria. Ultimately, four stations in the Kiewa valley will generate 104,000 kw., which, with the output of other stations in the mountain range, will add a total of 230,000 kw. to the state electrical system.

The Kiewa project calls for water to be delivered from two large storage reservoirs in the Bogongs region by an 8-ft. by 8-ft. tunnel through granite to the first power station where it drops 1,500 ft. in a steel penstock to the turbines. After generating 25,000 kw. the water will be augmented by the flow from additional drainage areas and led by open channels and rock tunnels to the other power stations until it finally drops about 2,400 ft. to turbines of 39,000 kw. capacity in the last power station, located on the river flat at Tawonga.

Senate adds to funds for flood control work

(*Continued from page* 1)

uthorized to spend $739,000 on the Buffalo Creek watershed in New York State. A sum of $2,000,000 to permit a tart of the $29,000,000 Raystown reser- oir project on a Juanita River tribu- ary in Pennsylvania was eliminated.

Roanoke and Savannah work added

Two large projects in the southeastern art of the country were added by Senate amendments, namely compre- ensive flood control for the Roanoke River at a cost not to exceed $36,140,- 00 and a $35,300,000 development for he Savannah River. A proposal to in- clude flood control for the Yadkin-Pee Dee river basin was defeated.

The Senate authorized much addi- ional work for the Mississippi basin, ncluding a $3,000,000 project on the Red River near Shreveport, La., the 11,080,000 Blakely Mountain project n the Ouachiata River basin in Arkan- as, an $810,000 reservoir project on he Sheyenne in North Dakota, $3,017,- 00 of work on Farm Creek in Illinois, nd a $1,610,000 project for the Chari- on River in Missouri. In addition, a 15,000,000 dam on the Des Moines River below Des Moines, Ia., a $2,613,- 00 project on Turtle Creek in Penn- ylvania, and a $23,822,000 develop- ent for the Kentucky River were dded to the comprehensive flood- ontrol plan for the Mississippi basin, lthough no additional specifications ere requested for these projects.

Additional work authorized to be one in California, over that approved y the House version of the bill, in- ludes: Development of Pajaro River, 511,000; Folsom reservoir on the Am- erican River, $18,474,000; Calaveras River and Littlejohn Creek, $3,868,000; nd Conn Creek reservoir on a tribu- ary of the Napa River, $460,000. The uthorization for the Sacramento River work was also increased from $46,056,- 000 to $50,100,000.

The Senate authorized only one addi- tional construction project for the Pacific Northwest. This was $669,000 of work on the Chehalis River.

The bill as passed by the Senate will now be studied by a joint committee of that body and the House. Since the St. Lawrence project and a Missouri Valley Authority are not included, no major fight is expected in working out a compromise bill. Moreover, Congress is wanting to adjourn by Dec. 16, which should speed up committee action. Thus, a flood-control measure seems fairly certain of enactment.

Operational funds voted Chicago filter plant

Funds in the amount of $100,000 have been authorized to the Chicago Water Department from city funds for initial operation of the city's South District Filtration Plant now under construction at 79th St. and Lake Michigan. A report by the city's committee on finance that this amount be authorized for salaries, wages, materials and supplies for operation of the plant during 1944 was approved by the city council on Nov. 10. Partial operation of the plant is scheduled to begin early in 1945 at which time coagulation and sedimentation units will begin operating to remove 70 percent of impurities from the water furnished to some 1,500,000 south side residents of Chicago.

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Alonzo Hammond dies; Chicago consultant

Alonzo J. Hammond, 75, member of the construction contract board in the office of Chief of Engineers of the War Department, died Dec. 1 in Washington, D. C. A native of Indiana and a graduate of Rose Polytechnic Institute in 1889, Mr. Hammond became city engineer of South Bend in 1901, which was a part time job allowing him opportunity to do consulting work on electric railways, water power and municipal engineering.

In 1910 Mr. Hammond went to Chicago where he soon became one of the outstanding engineers of the Midwest. At Chicago he served successively as consulting engineer to the Commission on City Expenditures, chief engineer of the Bureau of Public Efficiency, and engineer of bridges and harbors in the Department of Public Works. This position he resigned in 1925 to become chief engineer of James O. Heyworth Inc. on the design and construction of hydro plants. Subsequently he represented the Mellon-Stuart Company on its work in Cuba.

From 1927 to 1940 Mr. Hammond practiced as a consulting engineer in Chicago. Since then he has been serving the War Department in various capacities in Washington. He was elected president of the American Society of Civil Engineers in 1933 and president of American Engineering Council in 1940.

Pennsylvania retires many road engineers

Wholesale retirement of top engineers in the Pennsylvania Department of Highways was announced as an economy move on Nov. 30 by John U. Shroyer, secretary of highways, in connection with his announcement that C. H. Buckius had resigned his $9,000 a year job as chief engineer. No reason for the resignation was given, but unofficial reports stated that it was due to disagreement over policies. Mr. Buckius had held the position less than two years.

The men retired are: R. J. Harper, district engineer at $5,500; Allen M. Stone, acting district construction engineer at $4,200; P. M. Tebbs, construction engineer at $7,500; Ambrose M. White, principal construction engineer at $5,000; H. B. Halfpenny, supervisor of office service and supplies at $3,750; George A. Rahn, principal research engineer at $4,200; and Robert W. McCullough, assistant construction engineer at $3,564 per year.

The state highway department's system of divisions was abolished at the same time, thus eliminating positions of the following division engineers: W. A. Warrick at $5,750 per year; Charles R. Forbes at $6,000; S. R. Collins at $6,000; and Wm. H. Herman at $5,750.

Mr. Collins is to be transferred to the position of district engineer at Harrisburg; Mr. Warrick will succeed Mr. Tebbs as construction engineer; Mr. Herman will succeed Mr. Herber as research engineer; and Mr. Forbes is to remain unassigned for the present.

Earl S. Rice, head draftsman at $3,000 was dismissed "due to curtailment of forces" as were H. Luther Stoner, Thurman Clarkson, Leland P. Danner and Earl M. Neff.

John L. Herber, research engineer in charge of traffic planning and the testing laboratory, has been named to succeed Mr. Buckius as chief engineer of the department.

In announcing curtailment of the work of the department, Mr. Shroyer said that the department has few plans to construct new roads during 1945. The department, he states, has sufficient postwar plans ready to keep the forces busy for a year after the cessation of hostilities.

Nathan L. Smith, chief engineer of Baltimore, Md., has asked the Board of Estimates for $12,791,579 for 1945 in the budget of the Department of Public Works, which is under his control. This is an increase of $2,883,876 over the 1944 appropriation of $9,907,703.

Labor, public relations studied by A. G. C.

(*Continued from page 6*)

contractor's overall cost is for labor, and if, as expected, the yearly total volume of construction after the war reaches $20 billion, we in the construction industry can provide directly on the construction site, and indirectly in other industries, for 8 to 10 million workers." He warned however, that construction must be planned in advance, and construction other than public works depends on business conditions and prospects. He went on to say, "Construction is one major industry which will need no re-tooling and reconversion. Construction work can start just as soon as materials and labor become available. The only question is, will private enterprise and public agencies have sufficient plans developed to provide the construction work that can be handled and will be needed to cushion economic conditions after V-E Day and in the immediate postwar period?"

In the session devoted to the postwar era, H. E. Foreman called upon general contractors "to exercise their position of influence to provide the leadership which will aid the nation in realizing a higher level of employment and continued growth and progress. Construction is a giant industry, and the general contractor who has the sense of responsibility for the execution of construction work is a key figure in it. His influence on all operations of the industry can and should be great. They should also be constructive."

"In the future," he continued, "if industry—all industry—appears to oppose reforms demanded by the people and imposed through regulation by the government, the solution is to take the leadership in bringing about these reforms—most of which it (industry) has already advocated and initiated in its own operations." He pointed out that general contractors stand for high wages, for construction wages traditionally has been among the highest, and contractors also stand for rights of workmen, for collective bargaining is older in construction than in most other industries.

Another proposal for stimulating postwar construction was presented by William Muirhead in recommending that study be given to accelerated depreciation of structures as a stimulus to privately financing postwar construction. Specifically he recommended that consideration be given to permitting owners of structures built after the war to depreciate one-half the cost of the structure in the first quarter of its life for tax purposes. He believes that the alternative of permitting the owner of a structure to depreciate half the cost in the first quarter of the useful life of the structure would increase revenues to the Treasury and would stimulate new construction by allowing potential purchasers of construction to secure the return of a large part of their investment during a period of time in which they could with relative clarity foresee a profitable return from their investment. He went on to point out the advantages of accelerated depreciation over the straight line method now followed by the Bureau of Internal Revenue in determining exemption from taxation which may be charged to depreciation.

The time and place of the next annual convention, to be held in February or early March, was left to the discretion of the executive committee. Ever since the war began the A.G.C. has held small annual conventions with the membership delegating to the governing and advisory boards full powers to act.

Harry A. Dick, president of the Gilpin Construction Co. of Portland, Ore., and now serving as vice president, was elected for president for the year 1945. The new vice president next year will be Warren S. Bellows, head of W. S. Bellows Construction Co., Houston, Texas.

Many postwar projects listed for San Francisco

Postwar projects for San Francis to cost $131,180,000 over a six-yea period, of which $64,735,000 was r ported to be available, were recommended by the City Planning Commi sion to Mayor Roger D. Lapham r cently.

Involving 277 separate projects, th broad program, including tunnel freeways, school buildings and ne civic structures, was formulated by th commission from a total of 571 project recommended by various city depar ments.

Of the total, $29,809,682 would b spent during the first postwar yea including $1,300,000 for marginal fre ways, terminal sites and a central produce market.

Utility projects included in the wor are: Hetch Hetchy, $4,722,569; wate department, $5,869,000; and municipa railway, $1,800,000. A proposed Chin town housing project would cost $1,150,000.

Public Housing and utility project which would be self-liquidating amoun to $37,000,000 of the proposed expenditure.

JOBS OF THE WEEK

SUPERSTRUCTURE FOR FILTER BUILDING, Chicago, Ill.

Department Public Works, Chicago, Ill., awarded a contract for superstructur of filter building and administration building, South District Filtration Plant, Division A, to S. N. Nielsen Co., Chicago, at $1,497,000.

HOUSING, San Diego, Calif.

Dentzel & Whythe, Alhambra, were lowest bidders for constructing war dwelling units, at $785,000. Public Housing Authority, Washington, D. C opened bids. A. Wilson, Los Angeles and F. L. Hope, San Diego, are the engineers and architects.

BUILDINGS and FACILITIES, Klamath Falls, Ore.

Bureau of Yards & Docks, Navy Department, Washington, D. C., awarded a contract for additional buildings and facilities to Brennan & Cahoon, Klamath Falls, Ore., at $1,003,243. Whitehouse, Price & Perrin, Klamath Falls, are the architects.

HOSPITAL ADDITIONS, Los Angeles, Calif.

Veterans Administration, Washington, D. C., awarded a contract for additional buildings and utilities at Veterans Hospital to Robert E. McKee, Inc., Los Angeles, Calif. at $1,933,700.

ROAD, Pennsylvania

Pennsylvania State Highway Department, Harrisburg, awarded a contract for reinforced concrete paving, one reinforced concrete and one concrete and steel viaduct on Traffic Route 88, Leetsdale and Ambridge Boroughs, Allegheny and Beaver Counties, to Booth & Flinn Company, Pittsburgh, Pa. at $746,781.

HOUSING, Pleasanton, Calif.

G. W. Williams Co., Burlingame, Calif., was the lowest bidder for constructing 276 family dwelling units for Public Housing Authority, San Francisco, at $846,470. W. D. Peugh and Associates, San Francisco, are the architects.

Note—Additional bidding and contract news on many projects large and small appear in the Constructio News section beginning on page 732.

OBITUARY

George Wellington Pickels, 61, mem- of the civil engineering department, iversity of Illinois since 1907 and a king professor for the past 20 years, d Dec. 2. He received the degree of helor of civil engineering, University Kentucky in 1904 and the profes- nal degree of civil engineer from the iversity of Illinois in 1911. He spent entire teaching career at the Uni- sity of Illinois. His only other em- yment was with the Chicago and on Railroad in its civil engineering partment for three years. Prof. Pick- was the author of numerous engi- ring works, among them "Railroad rveying", "Route Surveying", "Drain- and Flood Control Engineering".

Edward J. Sullivan, 65, for many ars one of the leading public works ntractors in Flushing, New York ty, died Dec. 1. Mr. Sullivan had been member of the firm of Sullivan others.

Herbert Lawrence Ripley, 70, a re- ed civil engineer, for many years nnected with the New York, New ven & Hartford Railroad, died in w York City, Dec. 1. Mr. Ripley was th the railroad from 1898 to 1912, en left for a year with a large con- cting firm, returning to remain with e New Haven until his retirement in 35.

Lord Nelson Roney, 91, pioneer ilder and contractor in Oregon, died cently at Eugene. He was the builder many bridges in Oregon; Idaho and lifornia. He had been a resident of gene 70 years.

John Perry Erickson, 54, for 13 years luation engineer for the Utah State x Commission, died Nov. 19 in Salt ke City. Mr. Erickson, who received s engineering degree from the Univer- ty of Utah, was a civil engineer in lt Lake City prior to his association th the commission.

William J. Monaghan, 86, died in oledo, Nov. 19. A member of the eVore Engineering Co., he was a spe- alists in glass plant construction

John A. Sheridan, 47, zone commis- oner of the Federal Housing Admin- ation for the midwestern states, died ov. 26 at Washington, D. C.

Charles Henry Mothershed, 88, retired civil engineer, died at Sardis, Miss., Nov. 26.

Col. David Leonard Neuman, 53, commanding officer of the Marion, Ohio, Engineer Depot since Oct. 1943, and former engineer supply officer at the Columbus Army Service Forces Depot, died Nov. 24. He had served as an engineer executive officer at Camp Forrest, Va.; an instructor with the Michigan National Guard; on rivers and harbor duty in New York; and other engineer assignments. He was for three months battalion commander on construction of the Alcan Highway.

Ralph Briggs Kyle, 64, civil engineer, died Nov. 22 in Gainesville, Fla.

Sylvester A. Calhoun, 76, engineer and surveyor at Hot Springs, S. D., died recently. He was the first highway superintendent in Fall River County.

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The general administration for national highways in Argentina has appropriated $8,422,122 for work on the highway uniting Argentina and Paraguay. Part of the Inter-American highway system, this work entails two stretches between Vera and Reconquista and covers about 43 mi. of paving.

WEEKLY CONSTRUCTION SUMMARY

CONTRACTS

Continental U. S. Only
(Thousands of Dollars)

	Week Ending		
	Dec. 9 1943	Nov. 30 1944	Dec. 7 1944
Federal	$17,263	$21,245	$12,451
State & Municipal	1,209	3,694	4,148
Total public	$18,472	$24,939	$16,599
Total private	16,180	11,014	1,526
TOTAL	$34,652	$35,953	$18,125

Cumulative
1944......(49 weeks).....$1,654,621
1943......(49 weeks).....$2,972,217

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative	
	1943 49 weeks	1944 49 weeks
NON-FEDERAL	$313,445	$422,562
Corp. Securities	22,228	107,220
State & Mun.	125,539	170,402
RFC Loans	14,545	61,940
FPHA Loans	3,133	....
REA Loans	20,000	20,000
Fed-Aid Hwy.	128,000	63,000
FEDERAL	$2,753,838	$1,263,800
TOTAL CAPITAL	$3,067,283	$1,686,362

ENR INDEX NUMBERS

Index base=100		1913	1926
Construction Cost	Nov. '44	301.09	144.73
Building Cost	Nov. '44	236.10	127.63
Volume	Oct. '44	91	40

MEETINGS

National

CANADIAN CONSTRUCTION ASSOCIATION, annual meeting, Chateau Frontenac, Quebec, Canada, Jan. 15-17.

NATIONAL ASSOCIATION OF HOME BUILDERS OF THE U. S., postwar exposition and convention, Hotel Sherman, Chicago, Ill., Jan. 15-20.

AMERICAN ROAD BUILDERS' ASSOCIATION, 42nd annual meeting, Stevens Hotel, Chicago, Ill., Jan. 16-19.

AMERICAN SOCIETY OF CIVIL ENGINEERS, annual meeting, Hotel Commodore, New York City, Jan. 17-19.

Regional and Local

ASSOCIATED GENERAL CONTRACTORS OF MINNESOTA, 26th annual meeting, St. Paul Hotel, St. Paul, Minn., Jan. 11-13.

LOUISIANA ENGINEERING SOCIETY, annual meeting, St. Charles Hotel, New Orleans, La., Jan. 11-13.

OKLAHOMA SOCIETY OF PROFESSIONAL ENGINEERS, annual state meeting, Huckins Hotel, Oklahoma City, Okla., Jan. 12-13.

NEW YORK SECTION, AMERICAN WATER WORKS ASSOCIATION, midwinter luncheon meeting, Pennsylvania Hotel, New York, N. Y., Jan. 17.

PHILADELPHIA DISTRICT, AMERICAN SOCIETY FOR TESTING MATERIALS, symposium on magnetic particle testing, Hotel Benjamin Franklin, Philadelphia, Pa., Jan. 22.

NEW YORK STATE COUNTY HIGHWAY SUPERINTENDENTS ASSOCIATION, annual meeting, Albany, N. Y., Jan. 24-26.

NORTH CAROLINA SOCIETY OF ENGINEERS, winter meeting, Hotel Sir Walter, Raleigh, N. C., Jan. 26-27.

WISCONSIN COUNTY HIGHWAY COMMISSIONERS' ASSOCIATION, annual winter highway conference, Schroeder Hotel, Milwaukee, Wis., Jan. 30-Feb. 1.

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New interstate bridge at Hudson, Wis.

After twenty years of negotiations, the Wisconsin State Highway Commission has approved postwar construction of a new interstate highway bridge to be built across the St. Croix River at Hudson, Wis., to free traffic from an old toll bridge which has throttled traffic between the states.

The new bridge, to be a high-level structure to permit river traffic, will cost about $1,600,000, and in addition will entail expenditure of about $400,000 by Wisconsin to provide a new approach.

CONSTRUCTION REPORTS

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ELSIE EAVES, Manager *SCOTT McLEOD, Statistics* *J. A. MAHONEY, Reports*
(Daily service also available—Write for details)

WATER SUPPLY

PROPOSED WORK

Ark., Little Rock — Municipal Water Works, Robinson Auditorium, L. A. Jackson, mgr., new pipeline in Pulaski Heights area, $60,000.

Ill., Woodstock—City, R. H. Corr, supt. Water & Sewer, City Hall, made plans watermain extens. and overhead tank. Over $25,000. Alvord, Burdick & Howson, 20 N Wacker Dr., Chicago, engrs.

Mont., Harlowton—City, L. K. Kalberg, mayor, voted bonds, WW imprvs., incl. reservoir, weil, piping. $22,035. CD 10/20.

Tex., Houston—City, City Hall, 12 in. c.i. waterline in Armstrong Parkway, University Blvd. to Preston Rd. $22,000.

BIDS ASKED

Bids Asked December 14

†S. C., Winnsboro—Bd. Comrs. P. Wks., exten., imprv. water filtration plant, SC 38-250. **FWA.** Plans deposit $5 from engineer. Harwood Beebe, P. O. Box 289, Spartanburg, engr. CD 9/22—ENR 9/28.

Bids Asked December 15

Tex., Menard—City, Q. R. Sanders, mayor, City Hall, 200,000 gal. elevated steel water tank. Plans deposit $25. H. B. Gieb & Assoc., 1207 Texas Bank Bldg., Dallas, engrs.

†Tex., Waco—G. J. Rohan, supt. Waterworks, City Hall, one 4 m.g.d. pump and motor, 220 ft. head; one 6 m.g.d. pump and motor, 220 ft. head; two 9 m.g.d. pumps and motors, 30 ft. head, Tex. 41-706-N. **FWA.** Plans deposit $15. J. J. Rady, Insurance Bldg., Fort Worth, engr. CD 10/6—ENR 10/12.

Bids Asked December 18

†O., Bucyrus—City, F. Pfleider, serv. dir., City Hall, installing 23,000 ft. 12- to 18-in. c.i. pipe, low lift pump, high service pump, 500,000 gal. rein.-con. clear well and pump. facilities, O. 33-298-N. $164,000. **FWA.** Floyd B. Browne & Associates, Marion Bldg., Marion, engrs. CD 10/27—ENR 11/2.

Bids Asked December 22

★ **Md., Baltimore** — Bd. Awards, T. R. McKeldin, pres. at office City Register, City Hall, 36,400 ft. Liberty-Road-Montebello Tunnel (Patapsco Development). Plans deposit $10. L. Small, Dpt. P. Wks., Bureau Water Supply, water engr. N. L. Smith, ch. engr.; adv. ENR 12/7. CD 11/29—ENR 10/19.

LOW BIDDERS

Ill., Chicago—City Dpt. P. Wks., City Hall, Nov. 30, low lift pump. station and chemical bldg., South District Filtration Plant, Div. A, structural and miscellaneous work, from George Kehl Sons, 1225 Maplewood St., **$79,540**; Div. B, centrifugal pumps, piping, from G. D. Hardin, 3139 S. Indiana Ave., **$24,835.** CD 11/3—ENR 11/9.

CONTRACTS AWARDED

Calif., Oakland—East Bay Municipal Utility Dist., 512 16 St., Bixler Pump. plant, Spec. 59, to W. A. Bechtel Co., 155 Sansome St., San Francisco. **$242,845.** Bids 10/15. CD 10/31—ENR 11/2.

†Del., New Castle—Bd. Water & Light Comrs., 407 Delaware Ave., filtration plant, Del. 7-112, to J. A. Bader & Co., Inc., 923 Market St., Wilmington, **$36,297. FWA.** Bids 11/24. Albright & Friel, Inc., 15020 Locust St., Phila., Pa., consult. engrs. CD 11/14—ENR 11/16.

★ **Ill., Chicago—City** Dpt. P. **Wks.**, City Hall, general contract superstructures, filter bldg., administration bldg., South District Filtration Plant, Div. A, to S. N. Nielsen Co., 3059 W. **Augusta** St., **$1,497,000,** CD 9/18—ENR 9/21, under LB***Div. B, to Robert Gordon, Inc., 19 N. Jefferson St., **$82,150*****Div. C, to W. T. Mahoney & Sons, 158 N. Ashland St., **$49,600*****Div. D, to Robert Gordon, Inc., 19 N. Jefferson St., **$13,250.** Grand total $1,642,000. Bids 9/13, awarded 11/30.

Ind., Speedway City — Town Bd., Town Hall, watermains, well house, to Columbia Constr. Co., 2108 Columbia Ave., Indianapolis, **$26,175.** Bids 11/28, awarded 11/28. CD 11/16—ENR 11/23.

Ont., Rodney—Municipality, WW sys., to Carroll-Sharp Constr. Ltd., 2 Leader Lane, Toronto and Horton Steel Co. Ltd., Fort Erie. Est. **$110,000.** C. R. Hagey Engineering Co. Ltd., Fort Erie, engrs.

Location of ENR Correspondents

Symbols and Abbreviations Include:

†	Federal Government
★	Project of $500,000 or over
ENR	**Engineering News-Record**
CD	Engineering New-Record Construction Daily

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger; water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED: (except Streets & Roads):
BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR);

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

SEWERS, WASTE DISPOSAL

PROPOSED WORK

Calif., Los Angeles — Bd. Supervs. Los Angeles Co., 9,300 ft. 6 and 8 in. vitr. clay sanitary sewers in Daphine St., C.I. 1103. $27,700. A. Jones, Hall of Records, engr.

Ill., Urbana-Champaign — Urbana-Champaign Sanitary Dist. north of Big Four Shops, Urbana, separate sludge digester, pump house, primary sedimentation tank, About $51,000. Greeley & Hansen, 6 N. Michigan Ave., Chicago, engrs.

Ind., Elkhart—Bd. P. Wks., G. H. Neale, mayor, E. S. Sears, clk., City Hall, sewage treatment plant and sewers. $300,000.

★ **Ind., Hobart**—City Council, F. Rose, mayor, chn., sewage treatment plant, repairing, exten. sewerage sys. $500,000.

Minn., Osseo—Village, C. M. Heesen, clk., City Hall, sanitary sewerage sys., disposal plant. $75,000. Bond issue to be voted.

N. H., Laconia—State, State House, Concord, preliminary survey reconstructing sewage disposal plant, State School. $29,000. Metcalf & Eddy, 1300 Statler Bldg., Boston, Mass., engrs.

N. C., Sanford — Town, W. R. Willia mayor, voted bonds enlarging, imprv. sew age sys. $100,000.

Ore., Nyssa—City, City Hall, storm wa sewerage sys. $50,000. [illegible] & Heys Corbett Bldg., Portland, engrs.

Tex., Texas City—Town, bond elect Dec. 16, sanitary sewers. $150,000. J. Rady, Insurance Bldg., Fort Worth, en

Utah, Tooele—J. D. Gollaher, city m and city engr., sewage disposal pla $35,000. Applied to FWA.

Wash., Kennewick—City, City Hall, sew age sys. $80,400. FWA funds sought.

★ **Wash., Puyallup**—City, City Hall, finan ing election in March, sewerage s $685,000. Parker & Hill, Smith Tow Seattle, Zone 4, engrs. CD 9/9/42—E 9/17/42.

Wash., Soap Lake—City, City Hall, sewa disposal plant and sewerage sys. $50,0 Seeking FWA funds. G. D. Hall, Lar Bldg., Yakima, engr.

Ont., Elora—Municipality, sewerage s $35,000.

Ont., Milton—Municipality, J. W. Bla clk., outfall sewer and sewage dispo works, $40,000; storm sewers, $30,000. G Power, Oakville, engr.

BIDS ASKED

Bids Asked December 13

N. C., Wilmington—At office W. R. La mayor, refuse incinerator. $100,000. Pla deposit $5 from city engineer. J. A. Loug lin, city engr. CD 10/31—ENR 11/2.

Bids Asked December 14

Ont., London—Secy. Dpt. P. Wks., Ottaw sewerage sys., pumphouse, c.i. watermai valves, etc. at Health and Occupation Centre, Westminster Hospital. About $3 000. Plans deposit $15.

Bids Asked December 16

Tex., Grand Prairie—City, G. H. Turne mayor, City Hall, storm sewers, a purtenances. Plans deposit $15. Koch Fowler, 701 Great National Life Bld Dallas, engrs.

Bids Asked December 19

†Kan., Hays—At office V. A. Basgall, ci clk., sewage disposal works, Docket 14-25 $40,000. **FWA.** Wilson & Co., Salina, engr CD 6/7—ENR 6/15.

Bids Asked December 21

N. Y., Garden City—Incorporated Villa of Garden City, at Office Dpt. P. Wks., 1 Seventh St., addnl. sand filters, Contr. sewage treatment plant imprvs. Plans deposit $10. Havens & Emerson, 233 Bway New York, consult. engrs.; adv. ENR 12/7.

Bids Asked December 26

Calif., Los Angeles—Bd. Supervs. Los A geles Co., Hall of Records, 1.88 mi. vitr. cla sanitary sewers in Valley Ridge Ave., et C. I. 1092. $41,550. A. Jones, Hall of Re ords, engr. CD 11/8—ENR 11/16.

Calif., Monterey Park—Bd. Supervs. Lo Angeles Co., Hall of Records, Los Angele 10.41 mi. sanitary sewers in Sadler Ave etc., C. I. 1081. $224,000. A. Jones, Ha of Records, Los Angeles, engr. CD 11/8—ENR 11/16.

CONTRACTS AWARDED

†Md., Baltimore—Bd. Estimates, Cit Hall, installing 3,000 ft. 18- to 33-in. vitr clay interceptor sewer, Reedbird Ave., Md 18-219, to Frank Angelozzi & Sons, 122 High St., **$82,728. FWA.** Bids 11/10. C 10/24—ENR 10/26.

†Tex., Benbrook—U. S. Eng., 231 W. Ma St., Denison, incinerator plant, at Aircra Plant 4, to Webb Co., 1900 Oakland St Fort Worth, approx. **$25,000.**

Ont., Toronto—Scarboro Twp., B. L. Clut terbuck, reeve, J. T. Stewart, clk., 166 Kingston Rd., garbage incinerator, t Francis Hankin & Co. Ltd., 57 Bloor St W., about **$45,000.** Bids 11/20. CD 11/8—ENR 11/16.

BRIDGES

PROPOSED WORK

O., Barberton—City, D. D. Stevenson, serv ice dir., City Hall, voted bonds, 80 ft. spa bridge over Pennsylvania and Baltimore Ohio R. R., Tuscarawas Ave., $42,000; Eri Viaduct at Wooster Rd., $26,000. H. Bushey City Hall, city engr. CD 9/25—ENR 9/2

BIDS ASKED

Bids Asked December 12

N. Y., Brooklyn—Bd. Transportation, 25 Hudson St., New York, Zone 13, repairin

IDGES (Bids Asked, Cont'd.)

duct structure of Fulton St. Elevated , etc., Pitkin Ave. between Georgia Ave. Logan St. Extended date. CD 11/14— R 11/16.

Bids Asked December 13

ouisiana—State Hy. Dpt., Baton Rouge, River Bridge (Moncla) over Red River State Route 57, S.P. 33-03-05, Fed. Aid ondary Hy., Proj. FAS 81 (1), Avoy- Parish. Plans deposit $2.50. Bids 11/8 cted. CD 11/14—ENR 11/16, under LB.

BIDDERS

w Hampshire—State Hy. Dpt., Concord, , 21, 384 ft. deck plate girder bridge, roaches, Dartmouth College Rd., Lebanon, fton Co., from Henley-Lundgren Co., Franklin St., Worcester, Mass., **$184,963.** 11/9—ENR 11/16.

STREETS AND ROADS

S ASKED

Bids Asked December 12

linois—Div. Hys., Springfield, grading, ulder repair 0.65 mi. Sects. 20A and 14 A, .S. Routes 907 and 922, Dist. 9, William- and Jackson Counties, Bids Nov. 17 ected, CD 11/22—ENR 11/30 under LB; ement crushing 15.66 mi. Sects. 6R-1, 1, 8R-1, 9R-1 and 10R-1, F.A. Route 5, . 3, Livingston and Grundy Counties; 5 mi. Sects. 116-3, 117-3 and 22-3, F.A. ute 5, Dist. 8, Montgomery and Macoupin nties. Plans deposit $10 each. W. W. k, Springfield, ch. engr.

llinois—State Div. Hys., Springfield, vel or crushed stone surfacing 4.6 mi. d from Mt. Auburn northerly to Sanga- n Ordnance Plant, D.A.-W.I. Proj. 30A- , Dist. 6, Christian Co. Plans deposit W. W. Polk, ch. engr.

Bids Asked December 13

ouisiana—State Dpt. Hys., Baton Rouge, vel surfacing, drainage structures, etc. mi. S.P. 737-00-15, Maneuver Area Roads, oup 10, Sect. 2, State Route 113, Rapides rish. Plans deposit $1.

Bids Asked December 15

Kansas—State Hy. Dpt., Alma, resurfac- material 3.03 mi. Proj. 1757, Atchison ; 4.27 mi. Proj. 1758, Shawnee Co.; 999 mi. Proj. 1759-AB; 2.5 mi. Proj. 6; 6.172 mi. Proj. 1780; 17.582 mi. Proj. 1-AB, all foregoing Wabaunsee Co. C. Keeling, Topeka, state hy. engr.

Bids Asked December 19

Florida—State Road Dpt., Thos. A. John- , chn., Tallahassee, paving, small drain- structures, incidental items 1.937 mi. te Rd. 553 between point approx. 0.137 west of McGrits Creek and point approx. 65 mi. east and from point at east end of tega Creek Bridge Creek to point approx. 72 mi. east, Access Road Proj. No. -NR-9-A (1), Job No. 7222-301, Duval Co.; aring, grubbing, grading, sand bitumin- road mix pavement and incidental items 16 mi. Rd. 164 between point approx. 1.5 . northwest of Immokalee and point prox. 5 mi. north of Collier-Hendry Co. e, State Proj. Jobs Nos. 0309-104 and 6-107, Collier and Hendry Counties; 1.27 . Sadler Rd. between Road 13 and rnandina Beach, State Proj. Job No. 7400- , Nassau Co.; clearing, grubbing, grading, ., 7.9 mi. Rd. 15 between Tarpon Springs d New Port Richey, State Proj. Jobs Nos. 3-104 and 1502-107, Pasco and Pinellas unties; clearing, grubbing, grading, Ocala me rock base with bituminous surface atment, etc., 4.135 mi. Rd. 17 between llsborough Co. line and Lakeland, State oj. Job. No. 1601-106, Polk Co.; 3.689 mi. . 29 between Narcoossee and Orange Co. e, State Proj. Job No. 9205-104, Osceola .; lowering grade, constructing Ocala me Rock base with bituminous retread rfacing, etc., Rd. 79, at A.C.L.R.R. un- rpass 373 ft. Polk Ave. in Lake Wales, ate Proj. Job No. 1613-105, Polk Co.; ala lime rock base with bituminous re- eat surfacing, etc., 2.512 mi. Rd. 2A be- een Road 2, south of Gainesville and est Main St., in Gainesville, State Proj. b No. 2602-104, Alachua Co.; clearing, ubbing, grading, Ocala lime rock base with uminous retread surface 0.586 mi. Rd. 2 Jasper, State Proj. Job. No. 3201-104, amilton Co.; clearing, grubbing, grading, ala Lime Rock or shell base with tuminous surface treatment, etc., 6.795 . Rd. 139 between point approx. 0.5 mi. rth of Clay Co. line and Cedar Creek and tween Cedar Creek and Hamilton St. ong St. Johns Ave., Jersey St., and Park ., southwest of Jacksonville, State Proj. bs Nos. 7217-105 and 7217-106, Duval .; sand bituminous road mix pavement 42 mi. Rds. 10 and 115, Fort Walton, ate Proj. Job No. 5703-103, Okaloosa Co.; moval of existing structure and construct xteen 31 ft. concrete deck girder spans on ncrete piling 496 ft., Massalina Bayou ridge at 4 St., in Panama City, State Proj. b No. 4600-101, Bay Co.; repairing to athaway Bridge near Panama City con- sting of reconstructing one damaged con- ete pier and repairs to another pier, re- irs to Apalachicola Bay Bridge consisting reconstructing one damaged concrete pier, State Proj. Jobs Nos. 4602-904 and 4901-902, Road No. 10, Bay and Franklin Counties; constructing timber sheet piling bulkheads and paving side slopes Indian River Bridge at Cocoa, State Proj. Job No. 7010-901, Road 206, Brevard Co.; grading, grubbing, grading, constructing sand bituminous road mix pavement 0.228 mi. Rd. 70, State Proj. Job No. 7101-104, Brevard Co. Plans deposit $5 each set. J. H. Dowling, state hy. engr.

Indiana—State Hy. Comn., S. C. Hadden, chn., Indianapolis, bituminous resurfacing 6.84 mi. Contr. M-2557, Vincennes Hy. Dist., Martin Co.; 4.5 mi. Contr. M-2554, LaPorte Hy. Dist., Lake Co.; bituminous resurfacing sundry roads 8.87 mi. Contr. M-2555, Seymour Hy. Dist., Clark Co.; 9.04 mi. Contr. M-2553, LaPorte Hy. Dist., LaPorte Co.; 14.9 mi. Contr. M-2552, Greenfield Hy. Dist., Madison and Delaware Counties; 7.85 mi. Contr. M-2551, Fort Wayne Hy. Dist., Huntington Co.; 14.2 mi. Contr. M-2550, Crawfordsville Hy. Dist., Tippecanoe and Clinton Counties; bituminous resurfacing and concrete widening 10.28 mi. Contr. M-2556, Vincennes Hy. Dist., Orange and Martin Counties; concrete widening 19.26 mi. Contr. M-2558, Crawfordsville Hy. Dist., Parke Co.; 19.56 mi. Contr. M-2559, Fort Wayne Hy. Dist., Noble Co.; 20.2 mi. Contr. M-2560, Fort Wayne Dist., DeKalb Co.; 9.45 mi. Contr. M-2562, Seymour Hy. Dist., Jackson Co.; 25.52 mi. Bridge Contr. 2561, Greenfield Hy. Dist., Morgan, Johnson and Marion Counties. R. Bower, c/o owner, ch. engr.

Minn., Austin—C. M. Hubbard, aud. Mower Co., crushing, stockpiling 25,000 cu. yd. limestone aggregate, for production crushed rock aggregate for surfacing. Over $25,000. G. E. Carlson, co. hy. engr.

Bids Asked December 21

Indiana—State Hy. Comn., S. C. Hadden, chn., Indianapolis, bituminous resurfacing, concrete and bituminous widening 9.43 mi. Contr. M-2565, Fort Wayne Hy. Dist., Noble, DeKalb and Whitley Counties; 17.63 mi. Contr. M-2566, Greenfield Hy. Dist., Madison and Grant Counties; 12.08 mi. Contr. M-2567, LaPorte Hy. Dist., Clinton, Carroll and White Counties; 9.9 mi. Contr. M-2568, Seymour Hy. Dist., Jackson and Lawrence Counties; bituminous resurfacing 9.43 mi. Contr. M-2564, Fort Wayne Hy. Dist., Huntington and Whitley Counties; 10.11 mi. Contr. M-2563, Crawfordsville Hy. Dist., Montgomery and Boone Counties; 11.15 mi. Contr. M-2569, Vincennes Hy. Dist., Spencer Co.; concrete widening 7.11 mi. Contr. M-2570, Crawfordsville Hy. Dist., Warren and Fountain Counties; 10.22 mi. Contr. M-2571, Crawfordsville Hy. Dist., Hendricks Co.; 20.44 mi. Contr. M-2572, Fort Wayne and LaPorte Hy. Dist., Fulton and Miami Counties; 11.15 mi. Contr. M-2573, Vincennes Hy. Dist., Orange Co. R. Bower, c/o owner, ch. engr.

Bids Asked December 28

Washington—B. Bantz, dir. State Hy. Dpt., Olympia, clearing, grubbing, draining, placing selected roadway borrow on 3.445 mi. Primary State Hy. 1, Martins Bluff to Chicken Coop Inn, F.A.P. SN-U-FAP 5 (2) and 147-G (1), Cowlitz Co. Plans deposit $2.

LOW BIDDERS

Arkansas—State Hy. Dpt., Little Rock, Nov. 22, imprv. 7.1 mi. Mississippi Co., from Memphis Stone & Gravel Co., Exchange Bldg., Memphis, Tenn., **$70,436.** CD 11/14—ENR 11/16.

California—State Div. Hys., Sacramento, Nov. 29, imprv. 0.11 mi. San Joaquin Co., from Stockton Constr. Co., 40 W. Clay St., Stockton, **$72,956.** CD 11/23—ENR 11/16.

Louisiana—State Dpt. Hys., Baton Rouge, Nov. 29, imprv. 1.65 mi. Calcasieu Parish and 31.92 mi. Calcasieu and Beauregard Parishes, from H. M. Young, Jr., Louisiana National Bank Bldg., Baton Rouge, **$109,879;** 73.85 mi. Beauregard and Allen Parishes, from Carruth Contracting Co., Inc., Louisiana National Bank Bldg., Baton Rouge, **$291,432.** CD 11/20—ENR 11/23.

New York—H. A. Cohen, dir. Bureau Contrs. and Accounts, State Office Bldg., Nov. 17, imprv. 5.73 mi. Rensselaer Co., from Fitzgerald Bros. Constr. Co., Inc., Procter Bldg., Troy, **$96,113;** 4.17 mi Seneca Co., from Bero Engr. & Constr. Corp., McKinley Bldg., Buffalo, **$47,648.** Project for imprv. electrical work, lighting sys. for intersection Routes 7 and 8, Unadilla, near Sidney, Otsego Co., withdrawn, will readvertise. CD 11/2—ENR 11/9.

†Wash., Fort Lewis—U. S. Eng., 800 3 Ave., Seattle, Zone 4, Nov. 24, paving work area and streets at Mt. Rainier Ordnance Depot, Neg. 1059-A, from J. D. Shotwell, Puget Sound Bank Bldg., Tacoma, **$35,181.**

CONTRACTS AWARDED

†Del., Dover—U. S. Eng., 120 Wall St., New York 5, N. Y., road construction, to George & Lynch, 209 Delaware Trust Bldg., Wilmington, **$30,100.**

Georgia—State Hy. Dpt., Atlanta, imprv. 6.6 mi. Miller Co., to J. B. Gibson Constr. Co., Donalsonville, **$98,291.** Bids 11/28. CD 11/22.

Minnesota — State Hy. Dpt., St. Paul, crushing, screening, loading, hauling about 33,000 cu. yd. gravel for Maintenance Div. Dist. 9, St. Paul, Ramsey Co., to J. W. Craig Co., 1814 California St. N.E., Minneapolis, **$49,780.** Bids 11/8. CD 10/18—ENR 10/26.

New Mexico—State Hy. Dpt., Santa Fe, imprv. 15.486 mi. San Juan Co., to D. D. Skousen, 207 Springer Bldg., Albuquerque, **$169,235.** Bids 12/1. CD 11/22.

★ **Pennsylvania**—State Dpt. Hys., Harrisburg, imprv. 2.26 mi. Allegheny and Beaver Counties, to Booth & Flinn Co., 1942 Forbes St., Pittsburgh, **$746,781.** CD 10/31—ENR 11/2, under LB.

†Pa., Phila.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., approx. 12,000 sq. yd. 2 in. bituminous concrete, 6 and 8 in. rein.-con. on 8 in. stone paving, etc., to Union Paving Co., Broad and Stiles Sts., **$40,883.** Awarded 11/25.

Tex., Houston—City, City Hall, asphalt paving of skips in various streets, to Gaylord Constr. Co., 806 Blodgett St., **$50,980.** L. Fugate, City Hall, engr.

EARTHWORK, WATERWAYS

PROPOSED WORK

La., Empire—State Dpt. P. Wks., Baton Rouge, canal locks. $100,000. M. Odom, c/o Dpt. P. Wks., Baton Rouge, engr. CD 7/17—ENR 7/20.

R. I., Westerly—Town, A. Cottrell, Town Council, Town Hall, general waterfront imprvs., incl. land work, cleaning up, planting 15 mi. Watch Hill, shore line to Misquamicut. $25,000.

Alta., Calgary—Municipality, flood prevention works at Bow River, western sect. of city. $50,000.

BIDS ASKED

Bids Asked December 19

Louisiana—Bd. Levee Comm., Civil Court Bldg., New Orleans, approx. 5,300 ft. levee revetment on west bank Mississippi River, Orleans Parish from immigration station downstream. Plans deposit $10.

Bids Asked December 27

†Arizona—Bureau Reclamation, Court House, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Yuma, five 5,000 lb. motor-driven, double drum radial-gate hoists, for installation at Coachella turnout, All-American Canal Sys., Boulder Canyon Proj., Arizona-California-Nevada, Spec. 1783-D. W. R. Young, acting ch. engr.

Bids Asked December 28

†Ore., Bend—Bureau Reclamation, Dpt. Interior, H. W. Bashore, comr., Bend, earthwork and structures, Station 1630 plus 00 to Station 2378 plus 00, North Unit Main Canal, Deschutes Project, 21 to 31 mi. north of here, Spec. 1087. CD 10/18—ENR 10/26.

Bids Asked December 29

†Washington—Bureau Reclamation, Dpt. Interior, W. R. Young, acting ch. engr., Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Odair, rubber seals for floating caisson for maintenance of spillway bucket of Grand Coulee Dam, Columbia Basin project, Spec. 1785-D.

Bids Asked January 6

†Okla., Altus—Bureau Reclamation, Dpt. Interior, H. W. Bashore, comr., Altus, Sched. 2, 10,600 cu. yd. riprapping South and Lugert Dikes, Sched. 1, reconstructing Chicago, Rock Island & Pacific Ry. and State Hy. 9, involving 120,000 cu. yd. excav., etc., Altus Reservoir, 23 and 17 mi. north of here, Spec. 1084.

LOW BIDDERS

†Okla., Blair—Bureau Reclamation, Dpt. Interior, Altus, Nov. 20, constructing West Canal Turnout at Station 224 plus 25.3, Altus Main Canal, check at Station 224 plus 48.95, Altus Main Canal, earthwork and structures Station 0 plus 75.5 to Sta. 589 plus 25, West Canal, Spec. 1081, from H. M. Thompson & Co., Ellinwood, Kan., **$153,107.** CD 11/1—ENR 11/9.

CONTRACTS AWARDED

†Calif., Terminal Island—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., reinforcement and repair concrete bulkhead at Seaplane Anchorage, Naval Air Station, NOY 11230, to Guy F. Atkinson Co., 1103 Heartwell Bldg., Long Beach, Zone 2, **$29,723.**

†N. J., Sea Girt—U. S. Eng., 120 Wall St., New York 5, N. Y., retaining wall, to Kelly Pile & Foundation Corp., 827 Remsen Ave., Brooklyn 12, N. Y., **$63,253.** Bids 11/22.

LATIN AMERICA

LOW BIDDERS

Brazil, Rio de Janeiro — Paulo Affonso Falls Syndicate, c/o Dpt. P. Wks., Rio de Janeiro, plans 150,000 kw. hydro-electric plant. 7,000,000 Cruzeiro.

B. W. I., Antigua — Government, plans housing, 100,000 pounds (about $425,000); constructing 4 schools, 50,000 pounds (about $220,000).

LATIN AMERICA (Cont'd.)

Honduras, Tegucigalpa—Servicio Aereo de Honduras, S. A., Tegucigalpa, plans airfields. $150,000.

Honduras, Tegucigalpa—Servico Cooperative Interamericano de Salud Publica, Tegucigalpa, plans 2 story, 108 bed, stone, wood hospital for tubercular patients. $212,000. Cost will be borne by U. S. A. and Honduran governments.

Mexico—Federal Dpt. Public Works and Communications, Mexico City, plans reconstructing highway between Mexico City and Tuxpan (Vera Cruz). $800,000.

Mexico — Mexican Federal Govt., c/o Petroleos Mexicanos (Pemex), E. Buenrostro, genl. mgr., Ave. Juarez, Mexico City, plans refinery plant to manufacture high-octane gasoline and other petroleum derivatives, **Irapuato,** $5,500,000; receiving bids 270 mi. 14 in. crude oil pipeline carrier between **Poza Rica** and **Irapuato,** $11,000,000; Petroleos Mexicanos (Pemex) E. Buenrostro, genl. mgr., Ave. Juarez, Mexico City, plans crude oil pipeline carrier between area of **Tampico** to terminal at **Mazatian,** $3,093,000; between **Ebano** fields and **San Luis Potosi,** $1,218,000; from **San Benito** fields south of Vera Cruz to **Tapachula** on Guatamalan border, $844,000; from **Tamasopo** (near Tampico) to **Cardenas** (state of San Luis Potosi) $618,000. CD 10/31—ENR 11/2.

Mexico—State of Chiapas, Governor Juan N. Esponda, Tuxtla Gutierrez, plans water sys. in principal cities and towns of state. $1,000,000.

Mexico, Endo — Mexican Government, Comision Nacional de Irrigacion, Mexico, D. F., plans 200,000,000 cu. mtrs. irrigation dam, Tula River. $2,750,000.

Mexico, Guadalajara—Mexican Red Cross, Guadalajara, plans 500 bed hospital. $615,000.

Mexico, Matamoros — Municipal Govt., Ignacio Tortella, mayor, Palacio Municipal, plans municipal civil general hospital. $500,000. Public Health & Welfare Ministry, Dr. Gustavo Baz, secy. will aid in financing.

Mexico, Mexico City—International Hotelmen's Assoc., Antonio Perez, secy., Hotel Reforma, plans school to train hotel employees. $200,000.

Mexico, Monterrey—City, Jesus Leal Villarreal, mayor, plans modern market. $150,000.

Mexico, Puerto Mexico—Empacadora del Sureste, Santos Perez, pres., Pedro Palazuelos, genl. mgr., Puerto Mexico, bids within 90 days, constructing fish products cannery. $50,000.

Mexico, Saltillo — Mexican Government, Scrita. de la Defensa Nacional, Mexico, D. F., plans military camp for accommodation of all branches of service. $615,000.

Mexico, Tijuana—Dpt. Communications and Public Bldgs., Mexican Federal Government, Mexico City, plans pedestrian and vehicular bridge to connect Tijuana, Mex. with Tijuana, Cal. $100,000.

Mexico, Torreon—Dpt. P. Wks. & Communications, Mexico City plans constructing, equipping 40,000 hp. hydro-electric plant. $7,500,000.

Mexico, Zapopan — Mexican Government, Scrita. de la Defensa Nacional, Mexico, D. F., plans grand army air base, incl. 32 kilometers of runways and all army air schools in Mexico. $4,200,000.

Peru, Pucara — Republic of Peru, Lima, plans ceramics manufacturing plant. $50,000. **Dpt. Industrial Development, Lima, engrs.**

PUBLIC BUILDINGS

PROPOSED WORK

†Ariz., Dragoon—Pub. Housing Auth., NHA, Phelan Bldg., 760 Market St., San Francisco, Calif., 5 family trailers, Ariz. 2366.

†Ala., Gadsden—Missionary Servants of the Most Blessed Trinity, c/o Sister Mercedes of the Holy Trinity Church, Gadsden, plans by Schmidt, Garden & Erikson, 104 S. Michigan St., Chicago, Ill., nurses' homes, Ala. 1-289-N. $150,000. **FWA.**

†Ark., Pine Bluff—F. Moore, supt. County Schools, plans by M. Selligman, National Bldg., school, Ark. 3-189. $192,100. **FWA.**

†Calif., Fontana—Pub. Housing Auth., NHA, Phelan Bldg., 760 Market St., San Francisco, plans by J. Dewey Harnish, 212 E. B St., Ontario, 75 family trailers, Calif. 4908. CD 10/12—ENR 10/19.

★**†Calif., Oceanside**—Pub. Housing Auth., NHA, 2100 Linda Vista Rd., San Diego, rejected bids Nov. 24, 450 war dwelling units, Calif. 4900-N. Over $500,000. CD 11/28—ENR 11/30, under LB

†Calif., Pacific Beach (sta. San Diego)—Pub. Housing Auth., NHA, 2100 Linda Vista Rd., San Diego, rejected bids Nov. 21, 224 war dwelling units, Calif. 4914-N. CD 11/27—ENR 11/30, under LB.

†Calif., San Diego—Pub. Housing Auth., NHA, 2100 Loma Vista Rd., rejected bids Nov. 23, 250 war dwelling units, Calif. 4915-N. CD 11/28—ENR 11/30, under LB.

Ind., Franklin—Bd. Comrs. Johnson Co., L. A. Young, aud., Franklin, plans completed by McGuire & Shook, 1400 Fletcher Trust Bldg., Indianapolis, bids soon 2 story, bsmnt., brick, stone, rein.-con., steel hospital. $200,000. CD 5/24—ENR 6/8.

Ind., Noblesville—Bd. Comrs. Hamilton Co., C. S. Crooks, aud., Noblesville, plans by McGuire & Shook, 1400 Fletcher Trust Bldg., Indianapolis, 2 story, bsmnt., brick, hospital, just outside city limits, $175,000. Site purchased.

Ky., Somerset—City Hospital, Somerset, plans by S. C. Molloy, 132 Everett St., Louisville, 75 bed capacity hospital, $325,000.

†La., Shreveport—Pub. Housing Auth., NHA, 1205 Electric Bldg., 7 and Taylor Sts., Fort Worth 2, Tex., plans by E. F. Neild, City Bank Bldg., 150 trailer housing, **La.** 16111. CD 11/27—ENR 11/30.

†Md., Bethesda (br. Wash., D. C.)—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash. 25, D. C., preparing plans health service bldg. $200,000.

†Nev., Hawthorne—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., architect-engineer services by Blanchard & Maher, 369 Pine St., San Francisco, Calif., addnl. personnel facilities and magazines, Naval Ammunition Depot.

†N. H., Franklin—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., hospital.

N. H., Glencliff—State, Governor's Office, State House, Concord, plans by N. P. Randlett, Laconia, 3 story, bsmnt., concrete, brick hospital bldg. at State Sanatorium. $200,000.

†N. C., Raleigh—Bureau of Mines, Interior Bldg., E St. between 18 and 19 Sts. N.W., Wash. 25, D. C., bids soon mines bldg. First wing, est. $100,000. Total est. $500,000. N. C. State College deeded land to Bureau of Mines.

N. D., Mandan—M. J. Tobon, aud. Morton Co., Mandan, approved tax levy, courthouse. $180,000.

O., Columbus—Farm Bureau Cooperative Assn., Inc., 246 N. High St., grain elevator, rein.-con. $328,000.

★**O., Wooster**—City, approved $375,000 bond issue, hospital.

†Tex., Camp Hulen—U. S. Eng., 25 St. and Avenue F, Galveston, transforming army training camp into "War Prisoner" camp, incl. fencing, guard posts, machine gun towers, lighting sys., etc. $150,000.

Tex., Dallas—City, altering, remodeling, expanding courts bldg., etc. $150,000.

†Tex., Fort Worth—American Maunfacturing Co., Hodge Station, Fort Worth, bids soon expan., imprvs. shell mfg. plant. $275,000. Defense Plant Corp. will finance. CD 11/28—ENR 11/30.

†Utah, Manti—Pub. Housing Auth., NHA, 785 Market St., San Francisco, Calif., 50 unit single person stopgap (25 trailers) housing, Utah 42201.

†Wash., Bremerton—Pub. Housing Auth., NHA, Skinner Bldg., 5 Ave. and Union St., Seattle, Zone 1, recreation center **at** Sinclair Park Housing. $50,000.

Wis., Milwaukee—City, W. A. Klein, clk., appropriated $250,000 for slum clearance.

†T. H. Oahu—Pub. Housing Auth., NHA, 760 Market St., San Francisco, Calif., 1,000 unit family housing, TH-1-5.

★**Alta., Edmonton**—Dominion Govt., c/o Ministry of Veterans Affairs, Ottawa, Ont., plans by Rule, Wynn & Rule, 254 Birks Bldg., 300 dwellings. $1,200,000. CD 8/25—ENR 831.

★**B. C., Vancouver**—Dominion Govt., c/o Ministry of Veterans Affairs, Ottawa, Ont., plans by C. B. K. Van Norman, 475 Howe St., 600 dwellings. $2,400,000.

★**Man., Winnipeg**—Dominion Govt., c/o Ministry of Veterans Affairs, Ottawa, Ont., plans by Moody & Moore, 216 Graham Bldg., 300 dwellings. $1,200,000.

★**N. B., Fredericton**—Province of New Brunswick, Fredericton, 4 story, rein.-con., stone departmental bldg., St. John St. $750,000. Dpt. P. Wks., Fredericton, engr.

★**Ont., Toronto**—Dominion Govt., c/o Ministry of Veterans Affairs, Ottawa, plans by G. S. Adamson, 9 Elm St., 400 dwellings. $1,600,000.

★**Que., Hull**—City of Hull Co-operative, Inc., c/o City Hall, 300 dwellings in Wrightville sect. of city. $900,000.

BIDS ASKED

Bids Asked December 13

N. Y., Central Islip—Dpt. Mental Hygiene, State Office Bldg., Albany, Zone 1, hospital alterations. $22,000.

Bids Asked December 15

†Md., Cumberland—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash. 25, D. C., 1 story cadet nurses dormitory and teaching bldg., incl. relocating prefabricated dormitory unit from Dublin, Va. to serve as top story of new bldg., at Allegheny Hospital, Md. 18-2021. **FWA.** Extended date. S. R. Minter, 1st Natl. Bank Bldg., archt. CD 11/16—ENR 11/23.

Bids Asked After December 15

†N. C., Concord—Cabarrus County Hospital, Concord, nurses home at hospital, N. C. 31-297-F. $95,400. **FWA.** E. G. Flanagan, Henderson, archt. CD 11/14—ENR 11/16.

Bids Asked December 18

Minn., Springfield—City, A. C. Muel
clk., City Hall, steam turbine, conden
other auxiliaries in municipal power pl
$75,000. C. Foster, 316 Medical Arts Bl
Duluth, engr.

Bids Asked December 21

†Ga., Atlanta—Federal Works Agency,
and F Sts. N.W., Wash. 25, D. C., ne
nurses' home, Grady Hospital, Ga. 9-
Robert & Co., Inc., Bona Allen Bldg., arc
CD 11/16—ENR 11/23.

Bids Asked Sometime in January

★**La., Jackson**—R. H. Pettit, dir. St
Institutions, Capitol, Baton Rouge,
bldgs., East Louisiana Hospital. $1,000,0
E. F. Neild, City Bank Bldg., Shrevep
archt. CD 7/17—ENR 7/20.

Bids Asked January 20

Alaska, Anchorage—City, T. E. Dow
clk., classroom and gymnasium addn. to h
school. $200,000. Plans deposit $25. W.
Manley, Anchorage, archt. CD 10/13—E
10/19.

Bids Asked

†Conn., Groton—Pub. Housing Auth., NH
24 School St., Boston, Mass. (selected
bidders), water pump. station, Navy Heigh
Monhegan Heights and Starr Hill, Co
6011, 6012, 6014. A. Sleath, Niantic, en

Bids Asked

†Tex., Texarkana—U. S. Eng., 231 W. M
St., Denison, bids soon. Ordnance Sh
bldg. addn., Lone Star Ordnance Plant zo
Ser. 41-242-45-81. Over $40,000.

†Vt., White River Junction—U. S. En
31 St. James Ave., Boston, Mass. (select
list bidders), bldgs. utilities. No. 19-023-
Neg-60. $9,500.

LOW BIDDERS

†Calif., Albany—Pub. Housing Aut
NHA, Phelan Bldg., 760 Market St., S
Francisco, 100 family dwelling units, Ca
4894-N, from Standard Building Co., 15
Judah St., San Francisco, **$248,824.** C
10/30—ENR 11/2.

†Calif., Oakland—Yards & Docks, Na
Dpt., 18 St. and Constitution Ave. N.W
Wash. 25, D. C., Dec. 1, facilities for D
pendents Female Service Personnel a
addnl. facilities U. S. Naval Hospital, Sp
15425, NOY 11077, from Monson Bros., 4
Sixth St., San Francisco, **$439,177.** CD 10/
—ENR 10/26.

★**†Calif., Pleasanton**—Pub. Housing Aut
NHA, 760 Market St., San Francis
Nov. 28, 276 family dwelling units, Cal
4893-N, from G. Williams Co., 10 Californ
Dr., Burlingame, **$846,470.** CD 10/24—EN
10/26.

★**†Calif., San Diego**—Pub. Housing Aut
NHA, 760 Market St., San Francis
Nov. 24, 232 family dwelling units, et
Calif. 4903-N, from Dentzel & Whyte, 8
S. Date Ave., Alhambra, **$785,000.** CD 11/

†Calif., Upland—Pub. Housing Aut
NHA, 760 Market St., San Francisco, No
28, site development, 200 portable dwelli
units, Calif. 4890, from C. T. Lindsey,
Taraval St., San Francisco, **$396,000.** C
11/1—ENR 11/9.

†Conn., Fairfield—Pub. Housing Aut
NHA, 24 School St., Boston, Mass., Nov.
sewage disposal plant, Melville Ave. Hou
ing, Conn. 6072, from R Zoppo, 44 Ramsd
Ave., Roslindale, Mass., **$79,400.** Fletch
Thompson, Inc., 211 State St., Bridgepo
engrs. CD 11/16—ENR 9/21.

†Mass., Springfield—U. S. Eng., 31
James Ave., Boston, storage areas, Sp
19-023-45-NEG 59, from Daniel O'Connel
Sons, Inc., 480 Hampden St., Holyok
$72,331. CD 11/30.

†Pa., Clairton—Allegheny County Hou
ing Auth., 201 County Housing Auth
County Office Bldg., Pittsburgh, Nov.
site imprvs., Woodland Terrace housin
Pa. 36151, for NHA, from G. J. Packy C
110 Beechwood Ave., Mt. Vernon, N.
$60,000.

†Pa., Mifflin Twp.—Pub. Housing Auth
NHA, 270 Bway., New York 7, N. Y., No
30, site imprvs. Riverview Homes, P
36-221, from White Plains Contr. Co., 2
Dobbs Ferry Rd., White Plains, N.
$131,779.

†Wash., Seattle—J. W. Graham, archt
1501 Dexter Horton Bldg., 2 and Cher
Sts., Zone 4, Nov. 27, 2 story, 40x120 ft
rein.-con. nurses' home with 2 story, bsmnt
40x90 ft. wing, for Virginia Mason Hospita
Terry Ave. and Seneca St., from Thorbur
& Logozo, 4608 36 Ave. S.W., **$182,37**
FWA. CD 11/14—ENR 11/16.

CONTRACTS AWARDED

†Ala., Birmingham—Highland Ave. Bap
tist Hospital, 2236 Highland Ave., nurse
home, Ala. 1-285-A, to Day & Richardso
2400 5th Ave., **$199,400. FWA.** CD 10/2
—ENR 10/26.

★**†Calif., Los Angeles**—Veterans Admin
Vermont Ave. between H and I Sts. N.W
Wash. 25, D. C., addnl. bldgs., utilities,
Robert E. McKee, Inc., 4700 San Fernand
Rd. W., **$1,933,700.** Bids 10/17. CD 10/20—
ENR 10/26, under LB.

★**†Calif., San Francisco**—Housing Auth
of City and San Francisco Co., 5
Market St., 260 temporary family dwellin
units, Calif. 4885, for NHA, to Standar
Building Co., 1500 Judah St., $547,374. C
12/4, under LB.

BLIC BLDGS. (Contracts Awarded,
Cont'd.)

Mich., Detroit—Bd. Educ., 1354 Broad-
y Ave., 2 story, bsmnt., brick, steel,
-con., stone addn. Stevens T. Mason
hool, Mich. 20-361-N, to Jos. A. Kraus-
n Co., 1460 E. Jefferson Ave. Est.
000. **FWA.** CD 10/31—ENR 11/2.

Mich., Detroit—Bd. Educ., 1354 Broad-
y Ave., 2 story, bsmnt., brick, stone,
l, concrete school, Mich. 20-361, to Henry
Martins Co., 2111 Woodward Ave. Est.
,356. **FWA.** Bids 11/8. CD 10/31—ENR
/2.

N. J., Bayonne—Yards & Docks, Navy
t., 18 St. and Constitution Ave. N.W.,
ash. 25, D. C., installing heating sys. and
s for warehouse bldgs., NOY 10885, to
go Engineering Corp., 147 Fulton St.,
w York, N. Y., **$122,683.**

Ore., Klamath Falls—Yards & Docks,
Navy Dpt., 18 St. and Constitution Ave.
W., Wash. 25, D. C., addnl. bldgs., etc.,
Y 11014, to Brennan & Cahoon, Box 288,
amath Falls, **$1,003,243.** CD 11/27.

OMMERCIAL BUILDINGS

OPOSED WORK

Conn., Bridgeport—J. J. Hamblin, archt.,
dine St., Milford, soon lets contract lime-
ne, bluestone and granite church, Mill
ll Ave., for American Sons & Daughters of
rpatho-Russia, Inc., 370 Mill Hill Ave.
0,000. CD 5/17—ENR 6/1 under Postwar
rojects.

Conn., New Britain—New Britain General
ospital, 92 Grand St., making plans brick,
isolation hospital unit. $195,000.

★ **Mo., Kansas City**—Menorah Hospital,
4949 Rockhill Rd., medical unit, $750,000.

Pa., Erie—First Presbyterian Church, Rev.
R. Jackson, pastor, Peach and 5 Sts.,
ans by W. A. Taylor, Syracuse University,
racuse, N. Y., rebuilding church. $150,000.

Pa., Saltsburg — Kiskiminetas Springs
hool, L. M. Clark, pres., E. Green, chn.
ilding Com., Saltsburg, sketches by
wrie & Green, 321 N. Front St., Harris-
rg, two 2 story, bsmnt. L-shaped, brick,
ment dormitory bldgs., Tudor architecture.
0,000. Campaigning for funds.

R. I., Providence—St. Johns Ukranian
hurch, Public St., plans by Di Mitri & Di
itri, 187 Farmington Ave., Cranston, 1
ory, bsmnt., 2 wings, brick, stone church,
ublic St. $150,000.

S. C., Columbia—Epworth Orphanage, Dr.
. D. Roberts, supt., Millwood Ave., brick,
in.-con. bldg. $200,000.

★ **Wash., Spokane**—Deaconess Hospital,
Post and 4 Sts., plans by N. Thompson,
utton Bldg., 7 story hospital addn. $500,-
. Perry W. Swern & Associates, 19 S.
Salle St., Chicago, Ill., engrs.

Wis., Clintonville—Clintonville Community
ospital, Clintonville, plans being completed
E. A. Stubenranch, 708 Erie Ave., She-
oygan, bids in spring, and 2 story, 110x137
., T-shaped, brick hospital.

DS ASKED

Bids Asked December 13

N. C., Ahoskie—Roanoke-Chowan Hospi-
l, W. H. Basnight, pres., Ahoskie, hospi-
l. $150,000. J. J. Rowland, Kinston,
rcht.

OW BIDDERS

La., Alexandria—Dr. Murrell Hospital &
linic, Alexandria, clinic, hospital, from C.
Treadwell, 1523 Centenary St., Shreve-
ort, **$154,960.** Neild, Somdal & Neild, City
ank Bldg., Shreveport, archts.

ONTRACTS AWARDED

N. J., Kearny (br. Arlington)—St. An-
honys' Orphanage, Belgrove Dr., 1 story,
rick chapel, to E. M. Waldron, Inc., 48
ark Pl., Newark, **$150,000.** Benedetto
errara, 18 W. Homestead Ave., Palisades
ark, archt.

N. J., Paterson—Konners of N. J., 175
arket St., 2 and 4 story, brick, steel
tores bldg., to Weny Bros. & Storms Co.,
1 Lafayette St., **$150,000.**

★ **Que., Sorel**—Les Religieuses Hospital
Terese de St. Joseph de L'Hotel de Sorel,
ein.-con. fdn. for three 5 story, 46x125 ft.
ings, brick, frame, slab general hospital,
hemin Ste. Anne, to Marine Industries Ltd.,
t. Joseph de Sorel. Total est. about
0,000. E. Cormier, 2039 Mansfield St.,
ontreal, archt.

INDUSTRIAL BUILDINGS

ROPOSED WORK

Colo., Denver—PLANT—Gates Rubber Co.,
99 S. Broadway., soon lets contract 4 story,
smnt., 175x185 ft., rein.-con. mfg. plant.
Plans deposit $24. Wm. N. Bowman Co.,
nsurance Bldg., archts. CD 6/28—ENR
/29.

Ind., Fort Wayne — BAKERY — A. M.
trauss, archt., 415 Cal-Wayne Bldg., soon
ets contract 1 and 2 story, bsmnt., brick,
tructural steel, rein.-con., glass blocks
akery, for Perfection Biscuit Co., 250 Pearl
t. $100,000. Plans deposit $15.

Ind., Fort Wayne—PLANT—Wayne Co-
operative Milk Producers, Inc., 340 E. Berry
t., bids soon 1 and 2 story, 90x130 ft., with
5x60 ft. wing milk receiving and processing plant, brick, rein.-con., structural steel. $100,000. A. M. Strauss, 415 Cal-Wayne Bldg., archt. CD 10/23—ENR 10/26.

Ky., Louisville—PLANT—National Carbide Corp., 60 E. 42 St., New York 17, N. Y., chemical plant. $96,026.

Me., Winterport—DEHYDRATING BLDG., etc.—Maine Food Processes Co., Winterport, rebuilding, 100x1300 ft., concrete, brick, steel, dehydrating bldg. and boiler house. $50,000.

Mich., Detroit — FACTORY — Prevost Machine Products Co., 2616 E. Canfield Ave., plans by C. F. J. Barnes, 3774 Gladstone Ave., 1 story, brick, steel, concrete factory. Approx. $50,000.

N. H., Manchester—GARAGE—R. Theodore, c/o C. E. Peterson, archt., 32 Lodge St., 1 story, 55x120 ft., brick, steel, concrete garage.

N. J., Hillside — SHOP—H. Breen Iron Works, Inc., 1450 Chestnut St., 1 story, 61 x 250 ft., brick, steel shop. $50,000. A. Frank, 2824 Blvd., Jersey City, engr.

N. J., Newark—PLANT—Peerless Imperial Co., 407 Mulberry St., plans by L. Greenberg, 868 Broad St., 40 x 300 ft., plant addns., alterations, repairs. $50,000.

N. J., Paterson—PLANT—Wright Aeronautical Corp., 132 Beckwith Ave., soon lets contract addn. Bldg. 26, at Plant site.

N. J., Ridgefield—STORAGE—Lowe Paper Co., River Rd., 1 story, 100 x 100 ft., tile, steel, storage bldg., concrete passageway between new bldg. and present 1 story bldg.

N. Y., Schenectady—PLANT BLDGS.—General Electric Co., H. H. Newton, in charge, 1 River Rd., sketches 2 mfg. bldgs. United Engineers & Constructors, Inc., 1401 Arch St., Phila., Pa., engrs.

N. C., Jacksonville and Norfolk—BUS GARAGES—Carolina Coach Co., S. Blount St., Raleigh, soon lets contract 71x80 ft. masonry bus garages, with work pits. Plans deposit $5. Extended date. J. M. Edwards, Insurance Bldg., Raleigh, archt.

Ore., Grants Pass—DAIRY PLANT—Rogue Valley Dairy Co-op., V. Boehl, pres., Grants Pass, 80x100 ft. dairy plant. $60,000.

Ore., Portland — DAIRY — Arden Farms, Inc., 617 S.E. Main St., altering dairy, rebuilding powdered milk dehydration sys., installing addnl. equip. $99,750.

Ore., Portland—FACTORY—Fowler Mfg. Co., 1203 S.E. 8 St., plans by Claussen & Claussen, Guardian Bldg., 1 story, brick factory, 26 and Gladstone Sts. $90,000.

Ore., Salem—PLANT—C. S. Hamilton Furniture Co., Salem, plans by Freeman & Hayslip, 304 Postal Bldg., Portland, 2 story, 40x165 ft. concrete furniture plant. $96,000.

Ore., Salem — PACKING PLANT — Producers Cooperative Packing Co., W. H. Wood, mgr., Salem, rebuilding packing plant. $100,000.

Ore., Springbrook—PLANT—Springbrook Packing Coop., A Butler, supt., cold storage plant. $90,000.

Pa., Eddystone—PLANT—Baldwin Locomotive Works, R. C. Shew, plant engr., Eddystone, making plans, 80x130 ft., steel, brick plant $100,000 or more. H. M. Wilson Co., 18 and Brandywine Sts., Phila., consult. engrs.

Pa., Phila.—PLANT REPAIRS, etc.—Reading Co., E. Y. Allen, ch. engr., Reading Terminal, Phila., Zone 7, making plans general repairs to oil plant bldgs. and tanks, 3 and Berks Sts., $100,000. Radbill Oil Co., 3 and Berks Sts., lessee.

R. I., West Warwick—FACTORY—Original Bradford Soap Works, Inc., 200 Providence St., rebuilding factory. $40,000.

S. D., Yankton—PLANT—Croll-Freeman Co., 307 Walnut St., plans by W. J. Dixon, 204 Medical Arts Bldg., Mitchell, and bids soon plant. $50,000.

Tex., Brownsville—FREEZING PLANT—Pan American Freezers, c/o F. H. Floyd, C. R. Riecker, and M. H. George, Eagle Pass, bids soon (1st unit) 100x200 ft. quick freezing plant and 30x40 ft. bldg. to house machinery. $250,000.

Tex., Edinburg—PLANT—Polis & Hagan, Edinburg, citrus and vegetable packing plant unit. $42,000.

Tex., Garwood—PLANT—Wm. K. Lehrer, Garwood, 45,000 bbl. rice drying plant, rein.-con. $145,000. Central Engineering & Constr. Co., 1317 Jefferson St., Houston, engr.-archt. D. V. James, So. Standard Bldg., Houston, assoc. archt. Central Eng. Office. c/o A. Van Zyverden, ch. engr., 1317 Jefferson Ave., Houston.

Tex., Harlingen—PLANT—O. Daniel & Associates, Longview, 1 story, brick, rein.-con. canning plant. $45,000.

Tex., Houston—PLANT—Owner, c/o Central Engineering & Constr. Co., engr. and archt., 1317 Jefferson St., rice drying plant, rein.-con. $175,000. D. V. James, Southern Standard Bldg., Houston, assoc. archt.

Tex., Houston—BAKERY—Weingarten's, Inc., 808 Prairie Ave., plans by Finger & Rustay, National Standard Bldg., brick, rein.-con., bsmnt. bakery plant unit. $40,000.

Tex., San Benito—PLANT—Porter & Wentz, Malty Bldg., Brownsville, citrus and vegetable packing plant unit. $40,000.

Wash., Mount Vernon—LABORATORY—Washington Cooperative Seed Assn., Mount Vernon, hollow block concrete seed laboratory with 2 greenhouses. $40,000. H. O. Walberg, Courthouse, engr.

W. Va., Williamson — ROUNDHOUSE — Norfolk & Western Ry. Co., W. P. Wiltsee, ch. engr., Roanoke, Va., roundhouse, turntables, etc. $230,000.

Wis., Sheboygan—GARAGE—Green Bay Stages, Green Bay, plans by E. S. Stubenranch, 708 Erie Ave., 1 story, part bsmnt., 60x150 ft., brick, concrete block bus storage garage.

Wis., Wittenberg—PLANT—Consolidated Badger Co-Op., Shawano, plans by L. A. Geniesse, 226 W. Washington St., Green Bay, 1 story, 82x189 ft. milk plant, brick, rein.-con. structural steel, concrete fdn.

Ont., Toronto—PLANT—Canadian Insecticide & Chemical Co., Ltd., c/o W. R. Salter, 112 Yonge St., plant for mfg. insecticides, chemicals, etc. $50,000.

Ont., Toronto—WORKSHOP, etc.—A. E. Jupp Const. Co. Ltd., 58 Boultbee Ave., plans by N. A. Armstrong, 19 Melinda St., workshop garage and office, Blake St. $80,000.

Que., Grand 'Mere—PLANT—Crete Ltd., Grand 'Mere, woodworking plant.

Que., Laurier Station—SAW MILL—Alcide Mercier, Laurier Station saw mill exten. and woodworking plant. $75,000.

Que., Montreal—FACTORY—C. Marquette, 5565 Woodbury Ave., factory, St. Ambroise St. $50,000.

Que., Montreal—BOILER HOUSE—National Licorice Co. Ltd., 4211 Rouen St., rejected bids 1 story 38 x 40 ft., concrete, brick boiler house. $40,000. Will readvertise. H. W. Davis, 647 Belmont St., archt.

Que., Rouleau Siding — PLANT — Boise Superieur Ltd., Rouleau Siding, woodworking plant. $40,000.

Que., St. Roch de L'Achigan—MILL—E. Leclerc, St. Roch de L'Achigan, flour mill. $40,000.

BIDS ASKED

Bids Asked December 11

Conn., Norwalk—FACTORY—R. T. Vanderbilt, Inc., 33 Winfield St., brick factory addn., Winfield St. H. T. Lindberg, 5 E. 57 St., New York, N. Y., archt.

Bids Asked December 12

N. C., Rocky Mount—STOREHOUSES—Atlantic Coast Line R. R., R. W. Marye, ch. engr., Atlantic Coast Line Bldg., Wilmington, exten. shop storehouses at Emerson Shops. Over $40,000.

Bids Asked December 15

★ **Mass., Chelsea**—PLANT—Panther-Panco Rubber Co., Inc., 31 Highland St., (selected list bidders) superstructure 1 and 3 story, 148x681 ft., brick, steel, manufacturing bldg. $600,000. Waghorne-Brown Co., 101 Tremont St., Boston, engrs.

Bids Asked December 31

Mass., New Salem—MACHINE SHOP—Trustees New Salem Academy, New Salem, 2 story, 30x40 ft., cement block machine shop, concrete fdn. $40,000 with equip. B. Dirks, Montague, archt.

CONTRACTS AWARDED

Conn., New Haven — PLANT — Whitney Blake Co., 1565 Dixwell Ave., 1 story, 100x140 ft., brick, concrete, plant addn., to Austin Co., 19 Rector St., New York, N. Y. Est. **$40,000.**

Ill., Chicago—FACTORY—Mojonnier Bros., 4601 W. Ohio St., 1 story, 124x133 ft., brick factory, to A. B. Larson, 3833 W. Lake St. Est. **$115,000.** E. O. Sessions & Co., 1 N. La Salle St., archts.

Mass., Boston — WAREHOUSE — Paine Furniture Co., 81 Arlington St., altering warehouse, Arlington St., to Angus MacDonald & Sons, 9 Harcourt St. Est. **$40,000.** H. T. Anderson, 16 Royce Rd., Newton, archt.

N. J., Newark—PLANT—American Hair & Felt Co., 139 Lockwood St., 1 story, 44 x 281 ft., rein.-con. mfg. plant addn., to E. M. Waldron Inc., 40 Park Pl., **$45,000.**

Ore., Portland—PLANT—Dairy Cooperative Assn., 1313 S.E. 12 St., whole milk processing plant, to R. Hocken, 1914 S.E. 46 St. Est. **$150,000.** CD 10/20—ENR 10/26.

Pa., Bradford — LABORATORY — T. K. Hendyrx, archt., 409 N. Craig St., Pittsburgh, or 165 Interstate Parkway Bradford, brick, steel, concrete laboratory addn. to oil refinery, N. Kendall Ave., for Kendall Refining Co., Bradford, to L. H. Ludwig & Co., 20 W. Main St., Falconer, N. Y., **$43,000.** Bids 11/15. CD 11/13—ENR 11/16.

Pa., Bristol—OIL HOUSE—Fleetwings Inc., J. A. Stinson, plant engr., Bristol, 1 story, masonry oil house, to Penn. Valley Const. Co., Inc., 20 N. Penna. Ave., Morrisville. **$45,000.** Awarded 11/24.

Pa., Harrisburg—WAREHOUSE—Harrisburg Warehouses Co., c/o W. M. Mumma, 201 S. 2 St., 150x500 ft. commercial storage warehouse, to Pennsylvania Supply Co., 10 and Mulberry Sts., **$110,000.**

Pa., Monaca—WAREHOUSE—Pittsburgh Tube Co., H. M. Feely, Jr., ch. engr., and in charge, Penn Ave., 1 story, 60x85 ft., protected metal, steel frame warehouse side addn., to Pittsburgh Bridge and Iron Co., Union Bank Bldg., Pittsburgh. Est. **$40,000.**

INDUSTRIAL BLDGS. (Contracts Awarded, Cont'd.)

Pa., Phila. — LABORATORY — American Engineering Co., Aromingo and Cumberland Sts., research laboratory, to Godfrey R. Souter, Schaff Bldg., **$40,000.** Awarded 11/24.

Pa., Pittsburgh — WAREHOUSE, etc. — Hale Electric Co., Inc., J. E. Hale, pres., 6218 Penn Ave., 1 story, 60x80 ft., brick, cement block warehouse and garage, to Rose & Fisher Co., 702 Republic Bldg., 200 E. Ohio St. Est. **$40,000.** J. F. McWilliams, 601 Negley Bldg., archt.

Pa., Pittsburgh — WAREHOUSE — North Pole Cold Storage & Ice Co., E. J. Huckstein, pres., 1218 Carson St., 1 story, 37x85 ft., concrete block warehouse, to Landau Bros. Building Co., 125 1st Ave. Est. **$50,000.** G. Simons, Rear 258 Shady Ave., archt. CD 10/27—ENR 11/2.

Tex., Fargo—PUMPING STATION—Bell-Western Corp., Wichita Falls, pump. station (on crude oil pipeline) on 5 acre site, purchase and hire. **$75,000.** Site purchased. CD 1/28—ENR 11/30.

Wis., Milwaukee — FACTORY — Western States Envelope Co., 1616 W. Pierce St., Zone 4, design and construction 2 story, 60x120 ft., rein.-con. factory, to Klug & Smith Co., 111 E. Wisconsin Ave., Zone 2. Est. **$40,000.** Heating by Owner.

Wis., Preble (P.O. Green Bay)—PLANT—Miller-Rasmussen Ice Co., 306 Pine St., Green Bay, concrete fdn. for 75 ft. high icing plant, brick, to J. C. Bosten, 1329 Main St., Green Bay. Est. **$100,000.**

Ont., Ottawa — FACTORY — Burgess Tool Co. Ltd., c/o contractors, factory, west end of city, to Carleton Realty Co. Ltd., 18 Rideau St., about **$45,000.**

Que., Thetford Mines—STORAGE BIN—Asbestos Corp. Ltd., Notre Dame St., rock storage bin at asbestos mining plant, own forces. **$122.000.**

UNCLASSIFIED

PROPOSED WORK

★**Arkansas** — POWER LINE — Arkansas Power & Light Co., Simmons National Bldg., Pine Bluff, 110,000 volt power line from Pine Bluff to Helena; 66,000 volt line from Slovak to Hazen; 50 mi. line between North Little Rock and Morrilton. $1,050,000.

Arkansas — TRANSMISSION LINE—Riceland Electric Cooperative, Inc., Stuttgart, 185 mi. transmission lines, serving 800 members Arkansas Co. $185,000.

Conn., New Britain—SWIMMING POOL, etc.—City, Dpt. Parks, City Hall, 50x125 ft. swimming pool, 50x50 ft. wading pool on 13 acre site Newington Ave. and Wildwood St. $60,000. Site purchased. G. Molleur, City Hall, engr.

Conn., Stamford—RECREATION FIELD —City, G. R. Closs, clk., Town Hall, playground, baseball field, comfort station, picnic facilities, water line exten., for drinking fountains and bldg., West End, $25,000. L. Tuttle, Town Hall, engr.

†**Ind., Camp Atterbury** — SWIMMING POOL—U. S. Eng., Federal Bldg., Louisville, Ky., bids soon 60 x 100 ft., rein.-con. indoor swimming pool, filtration and chlorination equip. for Wakeman General Hospital. $125,000.

La., Homer—POWER TRANSMISSION LINES—Claiborne Electric Cooperative, Inc., Homer, addnl. electric power transmission lines. $300,000. REA allot. G. C. Hengy, 704 State Bank Bldg., Shreveport, engr.

La., Lafayette—POWER LINES—Southwest La. Electric Membership Corp., 203 N. College Ave., addnl. electric power transmission lines. $60,000. REA. allot. Swanson, McGraw & Hooper, Balter Bldg., New Orleans, engrs.

Mich., Escanaba—AIRPORT—City, G. E. Bean, mgr., City Hall, airport. Foth, Boyd & Porath, Columbus Bldg., Green Bay, Wis., engrs.

★**Montana**—PIPELINE—Home Oil & Refining Co., north of Great Falls, 90 mi. oil pipeline from Cut Bank to Great Falls. $500,000.

Montana—POWER LINES—Valley Electric Cooperative, Glasgow, power lines to serve Oswego and Frazer, Valley Co. $195,000 REA allot.

Montana—TRANSMISSION LINES—Valley County Electric Cooperative, Inc., Hinsdale, 178 mi. transmission lines, Glasgow Co. **$195,000.**

Mont., Conrad—AIRPORT—Pondera Co., Court House, approved bond issue airport, $30,000.

N. H., Hooksett — HANGARS — Bayside Flying Service, Inc., P. O. Box 270, R.F.D. 4, Manchester, Octagon hangar for 12 planes, 40 ft. entrances, 6 sides, Airport Route 3-A.

N. C., Concord—AIRPORT—City of Concord, W. A. Wilkinson, mayor, and Cabarrus Co., J. Lee White, chn. Bd. Comrs., Concord, airport, incl. two 3,500 ft. runways and one 1 mi. runway, on 375 acre site between Poplar Tent Rd. and Hy. 73, $75,000. Site purchased.

Oregon—SERVICE EXTENSIONS—Blachly-Lane County Cooperative Electric Assoc., Blachy, service extensions, Lane Co. $25,000.

†**Oregon**—RANGE CONVERSION—U. S. Eng., 628 Pittock Blk, S.W. 10 Ave. and Washington St., Portland, converting 4 army bombing ranges, 1 near Hermiston, Umatilla Co. and 3 near Boardman, Morrow Co.

Pennsylvania—SERVICE EXTENSIONS—Somerset Rural Electric Cooperative, Inc., Somerset, service extens., Somerset Co. $30,000.

Pennsylvania—SERVICE EXTENSIONS—Southwest Central Rural Electric Cooperative Corp., Indiana, service extens., Indiana Co. $50,000.

Pa., Aliquippa — WHARF, etc. — Jones & Laughlin Steel Corp., 3 and Ross Sts., Pittsburgh, replacing wharf and dock. $38,000.

†**Pa., Phila.**—SPRINKLER SYSTEM—U. S. Eng., Standard Oil Bldg., Baltimore, Md., making plans automatic sprinkler sys.

★**South Carolina**—DOCK, etc.—Shipyard Terminal Co., 14 Broad St., Charleston, rebuilding dock and ship terminal on Shipyard River, Charleston Co. $500,000.

Texas—GAS PIPELINE—Glenn H. McCarthy, Sterling Bldg., Houston, 25 mi. 10¾ in. natural gas (stripped) pipeline carrier between Winnie and Beaumont, Port Arthur, Port Neches, $100,000; pipeline gathering sys. in Winnie area (for new gasoline plant being constructed). $75,000.

★**Texas and California** — PIPELINE — Metropolitan Natural Gas Co., c/o C. A. King, Jr., pres., Midland, Tex., 26 in. pipeline to transport natural gas from Permian basin of West Texas to Los Angeles, Calif. $40,000,000.

†**Tex., Biggs Field (br. El Paso)**—RUNWAY—U. S. Eng., Albuquerque, N. M., runway and hard paving. Over $100,000.

★†**Tex., Randolph Field**—RUNWAY, etc.—U. S. Eng., Fort Sam Houston, postponed indefinitely bids to have been opened Dec. 8, addnl. airfield construction, incl. runways, etc., Ser. W-41-154-45-56. CD 11/28—ENR 11/30.

Tex., Texas City — SWIMMING POOL — Town, E. A. Johnson, mayor, Town Hall, vote levying required tax Dec. 16, rein.-con. swimming pool. $60,000. CD 9/27—ENR 10/5.

Virginia — SERVICE CONNECTIONS — Powell Valley Electric Cooperative, Jonesville, service connections, Lee Co. $50,000.

Washington—POWER LINE—Public Utility Dist. 1, Waterville, 70 mi. power line, Douglas Co. $75,000. REA allot.

Wisconsin—TRANSMISSION LINE—Wisconsin Power & Light Co., 122 W. Washington Ave., Madison, transmission line between Prairie du Sac and Dodgeville. $415,000.

†**Alaska, Ketchikan**—POWER DEVELOPMENT—City, voted bonds, bids soon, power development, Beaver Falls. $400,000. **FWA.** R. W. Johnson, Hoge Bldg., 2 and Cherry Sts., Seattle 4, Wash., engr. CD 9/5—ENR 9/7.

Alta., Jasper—SWIMMING POOL, etc.—Jasper Chamber of Commerce, A. Trudel, pres., Jasper, swimming pool, Jasper National Park area. $100,000.

B. C., Powell River—AIRPORT—Town, civic airport. $120,000.

B. C., Prince Rupert—LANDING FIELD—Western Pacific Airways, Ltd., Prince Rupert, landing field. $40,000.

BIDS ASKED

Bids Asked After December 1

New Mexico—PIPELINE—Valley Refining Co. and Murchison & Clousit Pipe Line Co., Artesia, 31 mi. 4 in. pipeline main between Caprock area and Dexter (Chaves Co.). $75,000 C.D 11/29.

Bids Asked After December 10

†**Tex., Beaumont**—RADIO RANGE STATION—Civil Aeronautics Admin., P. O. Box 1689, Fort Worth, Zone 1, ML radio range station.

Bids Asked December 11

Md., Middle River—REMOVING BLACKOUT INSTALLATIONS—Glenn L. Martin Co., Middle River, removing blackout installations from bldgs. A, B, C and D, and Flight Hangars 1 to 6, Plant 1, and various bldgs. Plant 2.

Bids Asked December 15

†**Ga., Rome**—AIRPORT IMPROVEMENTS —Civil Aeronautics Admin., 84 Marietta St. N.W., Atlanta, addnl. drainage, installing sub-drains, liming, fertilizing, seeding, fencing, lighting, airport, Proj. Code 9-09-040.

Bids Asked

†**Tex., Texarkana**—PARKING LOT—U. S. Eng., 231 W. Main St., Denison, bids soon parking lot at Ordnance Works, Ser. 41-242-45-79. $75,000.

LOW BIDDERS

†**Calif., Fairfield**—GAS STORAGE FACILITIES—U. S. Eng., 1209 8 St., Sacramento, Zone 8, addnl. gas storage facilities Fairfield-Suisun Air Base, Spec. 990, from Central California Constr. Co., 230 California St., San Francisco, **$49,500.**

Ill., Chicago—PIER—City Park Dist., E. 14 Blvd., Nov. 28, 2,41[illegible] ft. stone fi Montrose Pier to be capped with concr incl. 3,000 tons gravel, 4,1[illegible] cu. yd. rei con., from Simpson Constr. Co., 1113 Hermitage St., about **$122,900.**

Tex., Houston—COLISEUM SEATING F CILITIES—City, M. H. Westerman, sec City Hall, addnl. concrete, structural st platforms for addnl. seats in coliseum fr R. P. Farnsworth Co., Bankers Mortga Bldg., **$82,315.** L. Q. Cato, 2115 Gray Av archt. CD 11/28—ENR 11/[illegible]

†**Va., Richmond**—SPRINKLER SYSTEM U. S. Eng., 21 St. and Virginia Ave. N.W Wash, D C, Nov 27, sprinkler sys. A.S depot, near here, from Grinnell Co., In American Bldg., 10 and Main Sts., $396,9

†**Wash., Seattle**—SPRINKLER SYSTEM U. S. Eng., 800 3 Ave., Zone 4, Nov. 27, i stalling automatic sprinkler sys. at Ar Service Forces Depot, from Grinnell Co. the Pacific, Elliott Ave. and Bay St. $49,7

CONTRACTS AWARDED

†**Calif., Camp Roberts**—TRAINING AI —U. S. Eng., 74 New Montgomery S San Francisco, training aids at West Ga rison, Spec. 1777, to Howson Bros., Gilro **$41,805.**

†**Fla., Banana River**—HANGAR, etc. Yards & Docks, Navy Dpt., 18 St. and Co stitution Ave. N.W., Wash. 25, D. C., la plane hangar with special facilities f ground training purposes with two 2 sto leanto, Naval Air Station, NOY 10448, Algernon Blair, First National Bank Bld Montgomery, Ala., **$179,960.**

†**Fla., Daytona Beach**—LEANTO ADD TION—Yards & Docks, Navy Dpt., 18 S and Constitution Ave N.W., Wash. 25, D. C leanto addn. to aviation utility shop, Nav Air Station, NOY 10717, to James I. Barn Constr. Co., Orlando, **$143,500.**

†**Fla., Deland** — LEANTO ADDITION Yards & Docks, Navy Dpt., 18 St. and Co stitution Ave. N.W., Wash. 25, D. C., lean addn. to aviation utility shop, general supp storehouse and addnl. concrete parking ar for aircraft, Naval Air Station, NOY 1071 to Hillver & Lovan, 308 Consolidat Bldg., P. O. Box 371, Jacksonville, Zone **$241,248.** CD 8/2.

†**Fla., Fort Lauderdale**—LEANTO ADD TION—Yards & Docks, Navy Dpt., 18 S and Constitution Ave. N.W., Wash. 25, D. C leanto addn. to aviation utility shop a general supply storehouse, Naval Air St tion, NOY 10719, to F. J. Rooney, 5880 N. 4 Ave., Miami, **$69,837.** CD 8/2.

†**Fla., Jacksonville**—SPRINKLERS, etc. Yards & Docks, Navy Dpt., 18 St. and Co stitution Ave. N.W., Wash. 25, D. C sprinklers, draft curtains in hangars, se plane hangar, A & R Bldg., Naval Air St tions, Jacksonville, Cecil and Green Cov Springs, NOY 10565, to Automatic Sprinkle Corp. of America, Brittain St., Youngstow O., **$299,506.**

†**La., Shreveport**—RANGE FACILITIES U. S. Eng., 300 Bway., Little Rock, Ark range facilities, to Horton-Pollard, Bossie City, **$25,000.**

N. J., Bayonne—STEEL OIL TANKS Standard Oil Co. of N. J., E. 22 St., 5 stee oil tanks, wood pile on concrete fdns., ow forces. **$73,000.**

†**N. J., Bellemead**—SPRINKLER SYSTE —U. S. Eng., 120 Wall St., New York N. Y., sprinkler sys., to Industrial Automati Sprinkler Co., 111 John St., New York 7 N. Y., **$454,712.** CD 10/16—ENR 10/19.

†**N. J., Metuchen**—SPRINKLER SYSTE —U. S. Eng., 120 Wall St., New York 5 N. Y., sprinkler sys., to Globe Automati Sprinkler Co., 2035 Washington Ave., Phila. Pa., **$281,203.**

N. J., Newark — BLEACHERS — Newark Baseball Club, 258 Wilson Ave., bleachers and general repairs, Wilson Ave. Stadium, to Becker Const. Co., 361 Grove St., **$25,000.**

†**Okla., McAlester**—AIR CONDITIONING —Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., air conditioning, Naval Ammunition Depot, NOY 11390, to Carrier Corp., 710 N. Harwood St., Dallas, Tex., **$220,000.**

Tex., Galveston — AIRPORT — City, City Hall, airport facilities, grounds development, to Texas Gulf Constr. Co., 2215½ Mechanic St., approx. **$25,000.**

†**Va., Langley Field**—HANGAR MODIFICATION—U. S. Eng., Fort Norfolk, modification hanger for training facilities, to Virginia Engrg. Co., Melson Bldg., Newport News, **$47,200.** Bids 11/22.

†**W. Va., South Charleston**—RAILROAD TRACK STORAGE YARD—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., railroad track storage yard, Naval Ordnance plant, NOY 11106, to Construction Services, Inc., 21 Va. Ave., Charleston. **$56,800.**

N. S., Halifax—WHARF—Secy. Dpt. Munitions & Supply, Ottawa, Ont., reconstructing Wharf 4, H.M.C.S. Dockyard, for Dpt. Natl. Defense (Sea), Ottawa, Ont., to Foundation Maritime, Ltd., 135 Lower Water St., about **$310,000.** Bids 9/11. CD 9/7.

Proposal Advertisements see p. 23

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